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Page Number 110

- ☐ Images
- ☐ Foldouts
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A THREE-DIMENSIONAL PICTORIAL CONTENT MODEL FOR EVALUATING INTEREST IN PHOTOGRAPHS

By

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A THREE-DIMENSIONAL PICTORIAL CONTENT

MODEL FOR EVALUATING INTEREST

IN PHOTOGRAPHS

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PREFACE

This study explored the underlying values of interest in photographs by proposing a pictorial content model to investigate the picture preferences of high school seniors. The primary objectives were to investigate the possibility that readers view photographs using a consistent stock of signs as referents, and also to determine the types of photographs the seniors would like to see in university recruiting publications.

The development of the content model for this study drew heavily from Walter Ward's news model and Malcolm MacLean's work in photographic communication.

No research project such as this could succeed without the contributions of many persons. I owe my deepest thanks to these persons.

I would like to express special appreciation to my major advisor and committee chairman, Dr. Walter J. Ward, for his contributions to this thesis. His guidance, expertise and aid in the statistical analysis of the data was invaluable. I have been encouraged and motivated, professionally and personally, by his abilities as an instructor in the classroom and as a communication researcher.

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Also, I would like to thank the 20 high school seniors who volunteered their time to view and rank-order the 48 photographs of the study.

In addition, my gratitude is expressed to Dr. Woodfin Harris, Mr. Claude Maxwell, Dr. Ron Payne, and the people of the Audiovisual Center and University Photo Service for their patience and encouragement during this study.

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Finally, but not least, a special thanks to my parents, Bill and

Maxine Thomas; my sisters, Sue and Marilyn; and my brother, Wayne, for the many years of encouragement and understanding.

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TABLE OF CONTENTS

LIST OF TABLES

FIGURES

CHAPTER I

INTRODUCTION

Background

For over a century readers have been receiving a steady diet of photographic images in newspapers, magazines, and other publications. But do these images meet the conscious and unconscious desires and needs of the reader?

The editor, as gatekeeper in this flow of images, may often use pictures based on personal interests, perceived reader interests, the need to supply important information, or pressure from superiors. On the other hand, readership may be linked to such factors as subject matter, appeal, impact, and technical excellence (MacLean and Kao, 1972).

Although photographs are only part of the process of communication, their importance is undeniable, as was emphasized by George Gordon (1969).

> There exists no event in all of technological invention comparable to the cultural impact of photography. ...The invention of photography became a vehicle for the expression of an unlimited number of brand new visions of reality (p. 136).

Karin Ohrn (1976, p.2) wrote, "...photographic reports have shaped our ideas about our past, both our collective history and for each of our private selves."

Everywhere one turns in American society, a person is "bombarded" with visual messages. There is a proliferation of these messages from

newspapers, general consumer magazines, special interest publications, advertising, movies, and television. Photography, as one of these visual messages, has attained unprecedented popularity, both as a hobby and an art form.

This present awareness of the importance of pictures as communication, and not just window dressing, is not surprising. Newspaper readership surveys have long shown:

> ...that newspaper pictures stop readers and that readership of pictures is high in comparison to other elements of a newspaper. In the first hundred studies of "The Continuing Study of Newspaper Reading", the average news story in newspapers was read by 13 per cent of the men and 11 per cent of the women. In the same papers, the average one-column picture attracted 37 per cent of the men and 45 per cent of the women readers. Three times as many men and four times as many women read the average one-column picture as read the average news story (Woodburn, 1947, p. 197).

In a later analysis of The Continuing Study of Newspaper Reading, Swanson (1955) wrote:

> ...visual form with text is the sole form that dominates relations with readership.
>
> This is a striking relation. Cartoons, photographs, and photograph cutlines total 18.4 percent of all items and 51 percent of total readership. Visual form uses a fifth of the items to account for half of the readership (p. 414).

While pictorial readership awareness is not surprising, Maclean (1953), Hazard (1960), Ohrn (1976), Hightower (1976), and Smith (1977), to name a few, have noted how little communication research has been done on pictures. Two decades ago Maclean and Anne Li-An Kao (1963) wrote:

> It is curious how little research has been done on pictorial communication. A good picture, we believe, can tell a lot fast, and with a big wallop that the reader won't forget. ....Yet we have practically no research on how we can best make or select those "good" pictures to do such jobs for us. Despite the thousands of readership and audience studies, editors and photographers still have to fly pretty much by the

> seat of the pants in their decisions on pictorial communication (p. 230).

Several years later Karin Ohrn (1976), after noting the importance of the photographic image, also wrote of the limited communication research conducted on photographs. Ohrn stated that a review of communication literature made it apparent that "most scholars consider the Word as the imperial carrier of messages."

> This tendency stems from two primary assumptions: one, that photographs, as representations of reality, are neither the result of nor subject to interpretation; and two, that scholars who work in the medium of words are incapable of understanding or analyzing photographic images. It is disturbing to see creative and insightful scholars refusing to consider photographs relevant to their work, out of apparent deference to what they consider the outcome of a complex combination of technical skills (Ohrn, p. 3).

Anyone who takes time to consider that attitude might well come to the conclusion that photographic images are not images of "reality," nor are the technical skills involved any more important than are the paint, brushes, and canvas of the watercolorist or oil painter. The photographic message is subject to the same processes as is a verbal or written message.

Photographic communication involves a communication source, an encoder, the message, the channel, a decoder, and a communication receiver (Berlo, 1960). The communication source is defined by Berlo as "some person or group of persons with a purpose, a reason for engaging in communication." (p. 30). Photographers and editors,advertisers, and television producers are examples of visual communication sources. Communication is expressed in the form of a message--"the translation of ideas, purposes, and intentions into a code, a systematic set of symbols." (p. 30). However, the message needs an encoder who expresses

the message using ideas, motor skills and muscle systems, and technical aspects of photography, for example, to formulate the message. The channel is the medium used. For the purposes of this study, this will be published photographic images. Finally, for communication to occur, there must be a receiver and a decoder--that is, the reader, who receives or looks at a photograph and then decodes the message.

It is very important to note that the reader--to decode the photographic communication--must perform many of the same activities as the source and encoder. The reader uses his eyes, brain, visual vocabulary and cultural perception to decode the message. Speigel (1973) wrote:

> As the child grows, his personal experiences with various photographs aid in the development of a visual vocabulary, which in turn is used during the visual perception process. It is important to remember that ... a visual vocabulary is dependent on personal experiences in a visually rich culture. Just like other visual symbols, 'the way we interpret the pictures we observe is a function of our personalities, interests, unconscious dispositions, values and every other aspect of our psychological lives.' (p. 50; between quotation marks from McLuhan, 1964, p. 190.)

It is important to view the publication editor not only as a communication source or encoder, but also as a gatekeeper in the "flow" of communication. The editor chooses or selects the photographic messages to be passed through the "gate"--that is, the photos to use in the publication.

> The choice of a suitable picture to accompany a story can be a crucial decision in the communication process. The person who daily makes this decision--the photography editor--will often have the ability to influence, if not determine, the reactions of his audience to the events described in the story he is illustrating. Since photographs have the potential to create far greater impact than mere words, in a very real sense the photography editors' selections of which photographs to use are more important than the selections a word editor must make. The intentional or subconscious reasons for which he

> selects pictures for publications can, and likely will, mold the attitudes of the audience (Sanders, 1976, p. 130).

To be effective gatekeepers in terms of maintaining or increasing readership, or influencing audience reactions, editors are faced with basic questions about simple rules of thumb which should incorporate what has been learned experimentally about picture preference.

> A perusal of sociological and psychological journals shows that simple indices of picture interests are practically non-existent. Behavioral or experimental research in this area is often conditioned by complex and interlocking assumptions about perception and symbolization. In the world of art, rules of thumb are based on even more tenuous and uncritical intuitions. Except for a few methodologically unsound reader-recall polls, few attempts have been made to directly measure reader responses to pictures (Hazard, p. 515).

We are, therefore, back to square one, so to speak, with the knowledge that pictures are important, but that reliable guidelines are virtually non-existent. Due to a lack of research, editors are forced to edit pictures intuitively or by a "seat of the pants" approach to picture selection.

Feininger (1974) discussed the making of the perfect photograph. He pointed out, at least obliquely, the problem of trying to intuitively determine best photo selection.

> Sooner or later any ambitious photographer will have to come to grips with these [fundamental] concepts and clarify for himself the fundamental qualities which, in his opinion make a photograph good.
>
> The complexity of this task is perhaps best illustrated by a brief conversation between two people that I once happened to overhear at a photoexhibition. First person: "I really like this picture." Second person: "I don't." (p. 9)

Obviously, people view photographs with different interests and perceptions. However, pioneering research by MacLean, Kao, and Hazard identified six major subject matter groupings associated with picture readership (Maclean and Hazard, p. 140; Hazard, p. 524). They were

Idolatry, Social Problems, Picturesque, War, Blood and Violence, and Spectator Sports. Perhaps the most important result came from Hazard's (1960) research in which he concluded that photo content is more important than shape or concentricity (p. 140).

Laurent (1980, p. 35) found that the technical and educational qualities of slides dealing with a 4-H preventive health education program were not nearly as important to a slide's persuasiveness as the testimonial quality. Of the three variables, only on the testimonial variable was the actual subject matter of the slide important.

Almost from the time the first halftone was published, editors have struggled to ascertain how to use photographs effectively. The limited research conducted in pictorial communication suggests that content appeal is a promising area for further study.

The Problem

No editor is more interested in the efficacy of photo usage than the editor of the public relations publication. One such publication produced by institutions of higher education is the prospective-student handbook, or guide for new students. This type publication is produced not only to provide information about the university, but also to encourage potential students to attend that school.

This study evolved when a publications editor at Oklahoma State University sought to determine the most effective kinds of photographs for various university publics. Further, since it often is necessary to produce many pictures to accompany written text, there is a need to suggest to photographers what kinds of photographs to take. It was

decided to study photo appeal in only one type of publication--the aforementioned guide for new students.

It was felt that unless the guide published editorial material and photographs in which potential students were truly interested, its overall efficacy would be vastly reduced. After several interviews with the editor, some basic questions were identified.

What types of photographs will cause potential students to "read" a maximum number of pages, assuming that an interesting photograph might lead to reading the accompanying text? What order of preference will they place on the content types? Are there some types of photos published in the guide that are a waste of space? Should the use of some photos be increased?

Research has indicated that reader interests and editor interests may differ. This research has also shown that an editor's ability to predict picture appeal in the selection process can be increased from reader interest studies (MacLean and Kao, 1972).

Purpose and Objectives

The purpose of this study was to propose a basic theory of pictorial content based on three content dimensions which might act singly or in concert to predict the underlying values of picture appeal. These elements of content appeal are Prominence, Normality and Testimonial Quality. These content dimensions were used to determine high school seniors' photo values through the use of Q-sort methodology.

The objectives of this study were:

(1) To identify and test the elements of picture content appeal that lie behind the urge to "read" photographs in university recruitment

publications such as Oklahoma State University's Guide For New Students.

(2) To identify patterns of photo content preferences which are assumed to function cross-sectionally for pictures of all subject content.

(3) To determine similarities and differences among male and female high school seniors in their photo preferences.

CHAPTER II

REVIEW OF THE LITERATURE

Although editors and photographers have a serious need for simple guidelines relevant to the selection and use of pictures, research on picture appeal has been limited. Behavioral research on pictorial communication in sociology and psychology has often supplied confusing, complex and often contradictory assumptions about perception and symbolization.

Early publication readership studies have shown high picture interest. A scientific measurement of reader interest by George Gallup for the Des Moines Sunday Register in the 1930s revealed high picture interest. Gallup found that solid, unrelieved blocks of text received below-average readership. Armed with this information, the newspaper combined pictures and text and increased its circulation by 50 percent (MacLean and Kao, 1972, p.3).

Other studies, most notably those conducted by the Advertising Research Foundation, have supported the fact that pictures win the highest newspaper readership (Woodburn, 1947, p. 197; Swanson, 1955, p. 415). In fact, according to Woodburn, "Three times as many men and four times as many women read the average one-column picture as read the average news story" (p. 197).

Pictorial Communication and Perception

In Chapter I, the author briefly described Berlo's model of the communication process, which assumes a communication source, an encoder, the message, a channel, a decoder, and a communication receiver (1960). It was also stated that pictorial communication could be fitted to this process model.

According to Barthes (1977), factors of connotation play a major role both at the message's production and reception levels:

> ... on the one hand, the press photograph is an object that has been worked on, chosen, composed, constructed, treated according to professional, aesthetic or ideological norms, which are so many factors of connotation; while on the other hand, this same photograph is not only perceived, received, it is read, connected more or less consciously by the public that consumes it, to a traditional stock of signs (p. 19).

Unfortunately, all too often pictures have been viewed as the result of intuitive "picture sense", as having an intrinsic reality all their own, or as the result of complex technical skills.

Karin Ohrn (1976) noted the reluctance of researchers to study pictorial communication for these reasons, and also suggests the process approach to research:

> The activities of making and looking at photographs are communication events involving subjects, photographers, viewers, and the mediating technology. As in any communication act, the meaning of a photographic statement is socially constructed and contextually bound. And, like other communication events, the ways photographs are made, used, and looked at tend to be patterned according to social and cultural conventions (p. 6).

The communication researcher cannot view photographs as independent entities. The photograph may give much denotative information about its subject. However, connotative information also may be apparent to an observant viewer, revealing the attitudes, communication skills,

knowledge, and social culture of the encoders--that is, the editor and/or the photographer.

Much sociological and psychological research has noted the perception process in pictures. Hans Toch and Malcolm MacLean (1962, pp. 55-77) reviewed the transactional approach to perception and communication. Their review gives clear implications about the "meaning" in any communication, including pictorial communication, and an indication of the vast number of variables which might influence picture interest values. Their transactional approach regards perception as being continously and unavoidably enmeshed in "the enterprise of living." Thus, behavior--for example, responses to photographs, as is studied in this research--is both an outcome of past perceptions and a starting point for future perceptions. In fact, the Toch and MacLean state that people, as "users" of perception, are perceptual results themselves.

In contrast, Gibson's (1971) theory of structural information equivalence defines a picture in terms of the information within it. Therefore a picture is:

> ...a surface so treated that a delimited optic array to a point of observation is made available that contains the same kind of information that is found in the ambient optic arrays of an ordinary environment (p. 31).

Thus, a picture transmits information by functioning as an equivalent of the scene it is supposed to represent. It persuades because its representative nature encourages vicarious involvement (Laurent, 1980, p. 18). Such views tend to acknowledge only the denotative information in pictures.

However, a picture does not necessarily represent a scene in the

"real" world authentically. A photograph is only a slice of the overall pie of reality, and even that instant of life may be biased, dependent upon camera distortion, how the photographer chooses to portray the scene, and what the viewer chooses to perceive as relevant.

Bearing the above discussion in mind, Toch and MacLean offered the following assumptions on perception:

* There is no behavior without perception.
* Behavior is both an outcome of past perceptions and a starting point for future perceptions.
* Every human being is a constantly changing product of the situations through which he moves.
* The perceiver and his world do not exist independently.
* Each percept is the product of a creative act.
* We never find a stimulus with unassigned meaning.
* Meanings are given to things by the perceiver in terms of all prior experience he has accumulated.
* A percept is a link between the past which gives it its meaning and the future which it helps to interpret.
* Each experience or perception helps to provide us with expectations or assumptions about "reality". We expect the world to behave in accord with these assumptions.
* We make bets on the outcomes of our behavior and continue to modify these bets according to our assessment of the pay off.
* How assured we are in our bets depends on the amount and consistency of past relevant experience.
* We are often surer in our assumptions about simple physical things than we are about complex social relationships.
* Perceptual experiences are personal and individual, and they are learned.
* Perception is functional. It exists to enable the perceiver to carry out his purposes. It helps him cope with the world by assigning meanings to it which make communication possible.
* Though no two persons can have exactly the same meanings for things observed, common experiences tend to produce shared meanings which make communication possible.(Underlining added.)
* Most failures in communication are due to mistaken assumptions about correspondence of meanings.
* Systematic differences in experiences arising from cultural and sub-cultural differences create reliable differences in perception.
* Those things that have been tied in most closely and most often with past personal experience predominate perceptually over the unusual or the unfamiliar.
* The more complex a situation-observed, the more we are

> likely to differ in our situation perceptions. We will likely attend to somewhat different aspects and draw on much wider ranges of personal experience.
>
> * The thing-observed can never be exactly the same thing for two different people or for the "same" person at two different times (since he cannot be the same person).
>
> * Apparent physical properties of a percept (size of retinal image, for example) cannot be divorced from its other connotations (pp. 66-67).

George Gordon (1969) lends support to these assumptions. According to Gordon, a child develops a visual vocabulary through personal experiences with various photographs. This visual vocabulary is dependent upon, and a function of, "our personalities, interests, unconscious dispositions, values, and every other aspect of our psychological lives." (p. 137).

For a visual vocabulary relevant to photographs to be developed, the person must live in a visually rich culture (Speigel, 1973, pp. 54-55). Citing Agnes Fraser, Speigel provides an example of the confusion persons lacking in a visually rich culture may have when viewing a photograph:

> Even pictures are hard to understand, as one realized watching an African woman standing before a photograph of a Greuze [a French portrait painter] head and gradually discovering it was a head. She discovered in turn the nose, the mouth, the eye, but where was the other eye? I tried by turning my profile to explain why she could only see one, but she hopped round to my other side to point out that I possessed a second eye which the other lacked (Fraser, 1932, p. 38).

Communication researchers must therefore realize that it is impossible to conceive of a photograph as existing in a free state. As the headline in an article by Hightower (1976) stated "Readers See What They Want to See in Photographs." Hightower offered the following view:

> Even though a photographer wishes to "say" a certain thing with a picture, he may find that no one shares the intended meaning of the photograph. Meaning in pictorial communication

> is in the reader--it does not transcend that one to one relationship (p. 13).

Although many researchers recognize the relevance of perception in communication, most perception studies offer few simple guidelines in determining what readers want. What about the technical aspects of photography? Can a study of technical "rules" aid in determining reader interests? Probably not, as the following illustrates:

> The technical aspects of a photograph which deter many from ever examining photographs, are important only to the extent that they influence our perception of a person or a scene. Long lenses tend to condense or flatten elements in an image, so can create a traffic snarl out of a line of cars or a sense of intimacy between two men photographed from a distance. The use of a wide lens expands space and can distort a person's features. Lighting can alter the mood of a scene, and the use of flash can create a theatrical impression or harsh, even foreboding shadows. Long exposure influences the record of motion, usually blurring it, while a very short shutter speed can stop action we are incapable of seeing without the aid of a camera. In the darkroom, additional factors come into play: a photograph can be printed to minimize or even eliminate aspects of the image which the printer considers distracting. Sensitivity to the influence of technique can come with practice in looking at photographs and talking to a knowledgeable photographer: extensive knowledge of the technical aspects of photography is unnecessary (Ohrn, 1976, pp. 5-6).

Countless books, articles, and films on photography have tried to define what makes a good photograph, and thereby imply what will be liked by the viewer. Andreas Feininger (1974, pp. 119-128) states the qualities of a good photograph include Purpose and Meaning, Emotional Impact, Stopping Power, and Graphic Quality. Feininger describes these qualities, but on the whole, these descriptions do nothing to simplify the variables of appeal. Emotional impact, for instance, is described as:

> ...an elusive quality, whose absence is often more noticeable than its presence. If a photograph leaves the viewer cold, it lacks emotional impact, at least as far as he is concerned.

> If, on the other hand, it makes him react, if it makes him feel happy, proud, nostalgic, sad, compassionate, if it makes him laugh or cry, if it stirs his anger or sexual desire, in short, if it makes him experience anything beyond the immediate physical aspects of the depicted subject, then it has emotional impact (p. 123).

Such discussions offer little help to communicators in understanding, operationally, the underlying structure of picture appeal. We may "know" that a picture contains whatever the perceiver wishes to perceive as the message. We may "know" that camera technique, photographic "style", or emotional impact aid in making a "good" picture. But, much of the discussion and research on the photograph has lead to little "understanding" of the underlying values of picture appeal.

While the foregoing discussion has indicated the complexity of the problem on the surface, the underlying values of picture appeal may be more definable than the perception personalities of individual viewers or readers.

The Significance of Content

A great deal of research as well as theoretical philosophizing on pictorial communication may be broadly categorized as having denotative and/or connotative characteristics. That is, a picture that supplies representational information documenting the environment of a scene may supply symbolic meanings as well (Levy, 1982, p. 5).

Bert Woodburn (1947, pp. 197-201) analyzed readership of news pictures of various kinds as revealed in the first 100 issues of The Continuing Study of Newspaper Reading. He found that size and picture content are the most significant factors which affect readership of

newspaper pictures. "Newspaper readers," he said, "seem to read what interests them and touches upon their lives" (p. 199). Taking 698 two-column photographs and classifying them by subject, and determining median readership for each subject, Woodburn found interests among men and women readers. The men ranked human interest, national defense, crime, servicemen's news, war news, and science and oddities high in interest, while rejecting pictures of women's, society, and club news, fashions, and food and table decorations. The women, on the other hand, ranked highest pictures of weddings and engagements, followed by children and babies, women's, society and club news, crime, servicemen's news, human interest and science and oddities. The women seemed to reject sports pictures.

A later analysis of pictures in the Continuing Study by Swanson (1955, p. 416) suggested readers preferred fire-disaster, war, weather, consumer information, human interest, major crime, country correspondence, accidents-mishaps, science-invention, and defense. Again, differences were noted in the readership of men and women. Women appeared to have more interest in a larger number of subject-matter categories than men.

Prior to the early 1950s most research on pictures in publications were readership studies which suggested little more than that pictures received high readership and that there were subject-matter categories preferred by readers over other categories. This however, provided the base upon which noted communications researchers Malcolm MacLean and William Hazard made the first attempt at explaining the principal kinds of picture appeal through (1) picture-to-picture intercorrelations of interest, (2) factor analysis of the interest variations, and (3)

analysis of picture content and comments made by persons who rated a picture very high or very low (1953, p. 140).

Their Badger Village study of women's interest in pictures yielded the following results:

1. Thirty-one of 51 pictures covering a wide variety of subjects split into six major groups of interest. These they named as follows:

   a. Idolatry (fame, fortune, high society)
   b. Social Problems (perjury, strike, mass riot, slums, interracial marriage, unkempt woman, main street delinquents)
   c. Picturesque (flowers, fishing, nostalgia, use of hands, dramatic lighting)
   d. War (warship, soldiers, wounded, dead)
   e. Blood and Violence (shooting, drowning, bloody wreck)
   f. Spectator Sports (football, boxing)

2. Some of the remaining 20 pictures contained one or more of the major groups of interest, but since they did not correlate closely with the major interest groups, they suggested that other factors are involved.

3. Recognition of the subjects and/or identification with the subjects seemed to be important factors--for example, "dream wish fulfillment" on the Idolatry factor (pp. 144, 155).

The pictures used in the Badger Village study were uncaptioned, which MacLean and Hazard felt may have led to a lack of recognition of the subject and as a consequence lower interest in the picture (p. 141). Kerrick (1955, p. 178), in a connotation study, used semantic differential scales developed by Osgood to determine the influence of captions on picture interpretation. The results provided evidence for the following points:

1. A caption will tend to cause a significant general modification of judgments regarding the picture it accompanies. It is possible for a caption to cause a complete

> change in interpretation, so that, for example, a picture which is usually judged a "happy" picture, will be judged a "sad" one.
>
> 2. For the most part, the influence of a caption can be anticipated by the writer of the caption.
>
> 3. In some instances, however, the caption may cause an interpretation directly opposite to that desired by the caption writer.
>
> 4. By and large, captions which suggest meanings incongruent with the content of the picture will be rejected, and interpretation will be primarily a response to the picture alone. This is by no means always true, however (p. 182).

Fedler, Counts, and Hightower (1982, p. 633-637), however, found that changing the wording of captions failed to reduce some photographs' offensiveness, especially if the subject matter dealt with death or violence.

In 1960, William Hazard published an article on a study in which he sought to investigate the influence of internal organization (its concentricity) and shape as determinants of picture interest. His independent variables were subject matter,--drawn from the categories in the MacLean and Hazard study--picture shape and internal organization, with the dependent variable being perceived impact (p. 152). Hazard's results indicated that subject matter was the main determinant of interest, with shape being second and concentricity third.

Researchers Fosdick and Tannenbaum (1964, pp. 175-182) provided early support for the notion that message senders may imply and receivers may infer connotative meaning from a consistent or standard stock of signs or symbols. In this case, Fosdick and Tannenbaum asked photographers to photograph four pieces of sculpture, each under prescribed conditions of message intent. Stylistic elements used by the photographers to convey a connotative meaning, or mood, were recorded. These were: model angle, light contrast, camera angle, camera tilt,

image size, vertical light angle, horizontal light angle, number of lights, background tone and overall print tone. Their research found that 16 news photographers used certain stylistic elements in consistent ways to modify the connotative meaning which a message topic will have for the reader (p. 181). According to Fosdick and Tannenbaum, each message channel modality (for example, written messages, speech, painting, and photographs) has its own traditional set of characteristics related to semantic responses in the decoder or the connotative intent of the encoder. They also suggest that there is considerable adaptation of stylistic elements from one modality by practitioners of another (p. 182).

From this we might hypothesize that although viewers decode pictorial messages according to their own perception personalities, it is reasonable to expect certain commonalities of decoding referents of connotative meaning and hence interest appeal values.

In a re-analysis of the previous study of picture interest by MacLean and Hazard, MacLean and Kao (1972, p. 39) found intangible picture appeals which function cross-sectionally for pictures of any subject matter--for example, the six subject-matter groups of Idolatry, Social Problems, Picturesque, War, Blood and Violence, and Spectator Sports of the the earlier study. In a preliminary experiment these cross-sectional dimensions were Like-Dislike, Intensity-of-Feeling, Complexity-Simplicity, and Clarity-Obscurity. Using Q-methodology, this preliminary experiment yielded results which suggested that readers were hedonistic in their liking--that is, they revealed an appreciation of pleasantness, comfort and enjoyment. The readers liked or disliked pictures which aroused strong feelings. Also, it was found that the

dimensions of Simplicity-Complexity and Clarity-Obscurity were sometimes confusing to the Q-sorter, and these were dropped from later phases of the research (p. 130).

In the third phase of the MacLean and Kao study, the cross-sectional dimensions were Like-Dislike, Intensity-of-Feeling, Actual Self-Identification, and Ideal Self-Identification. Again, Q-methodology was used to study reader interests, with 72 Q-sorts being performed by 18 subjects along the four dimensions. They found that Self-Identification, especially Ideal Self-Identification, was important in picture appeal. Also, most of their sorters had similar likings and dislikings which were hedonistic (p. 130). Their analysis suggested the following:

> 1. Women of different age groups, with financially or morally secure backgrounds, valued pictures of art and scenery most highly, pictures with people in a "cute" situation second, and pictures of glamour or fame third. However, they rejected pictures of death, violence, and destruction (pp. 131-132).
> 2. Men in general valued pictures of sports, sex, and action, and disliked gruesome pictures of death and violence. Some males, usually with less education and lower incomes, however, liked pictures of war, violence, science and social problems (p. 132).

In the final phase of the MacLean and Kao study, three kinds of editors were asked to predict two readers' Q-sorts based on a value dimension, providing four different levels of information. The four levels of information were: 1. minimal demographic information, 2. detailed demographics, 3. one of the predictees' two Q-sorts, and 4. one

of the two Q-sorts plus detailed demographic information. It was found that the more information the editors had on which to predict interests, especially the Q-sort of the predictee, the better the editors' predictions (p. 132).

It seems clear that readership studies have shown content to be the most important factor in predicting reader interests. However, content appeal has been described by lists of subject-matter categories, and suggestions that people are hedonistic in their picture values and make selections based on self-identification. This has necessitated that future studies devise even more subject categories to explain common interests. Research has also suggested that if the reader is to be given what he/she wants and needs, the editor must have access to extensive demographic data as well as the subject interests of the reader.

The author believes, however, there are common elements, or facets, in photographs, and that these elements can lead to understanding the underlying structure of picture appeal values.

Picture Appeal: the Underlying Structure

One of the recommendations to come out of the MacLean and Kao study was to use facet analysis to determine different picture types. Facet analysis is, essentially, the structuring of semantically independent types of stimuli which are relevant to the researcher's needs (Guttman, 1958, pp. 497-515). Therefore, the researcher would study the facet, or combination of facet elements relevant to each picture type, and what makes those types different from one another. In their fifth phase, MacLean and Kao found three types of reader picture values as follows:

In Type A, there was a facet of tranquility. In Type B,

> modernism was found--interest in forms, science, current activities. Type C is interested in human relationships (p. 138).

Although not specifically mentioning facet analysis, Laurent (1980) proposed that a person's rating of slides is governed by certain principles of picture perception which can be classified under categories of Technical Quality, Instructional Quality, or Testimonial Quality (p. 31). Technical Quality was defined as how a picture is taken, involving composition, good contrast and focus, eye movement, simplicity, et cetera (pp. 31-33). Instructional Quality was defined by slides which transmitted information well and thereby promoted learning (pp. 33-34). Testimonial Quality was to what degree the subject matter depicted the needs and values of the viewer, especially slides which showed participants in a 4-H program "learning and doing new things, interacting with each other, having a good time and feeling healthy" (pp. 34-35).

Laurent found three types of respondents, identified according to degree of realism, selected demographic characteristics, and psychological need:

> Factor I: preference for realistic photos; predominantly female; seekers of a sense of group identity; action-oriented.
>
> Factor II: preference for words; predominantly male; fitness orientation.
>
> Factor III: preference for drawings, cartoon-like illustrations, and other graphic, less realistic visuals; older females; traditional homemaker orientation (p. 77).

Laurent used multiple regression analysis of Q-sort data to test for the interplay of the three independent variables within the three perceptual types, or factors. Negligible interplay was found. However, the major conclusion was that the Testimonial Quality of a slide was the

major predictor of responses to slides. Thus, slideshows could be improved by "discovering the viewer's needs and values and depicting them in the subject matter of pictorial stimuli, and in the preferred perceptual style of the viewer" (p. 78).

Laurent's study places the burden of predicting picture response on "knowing" the viewer or viewers, which can be difficult or even impossible. As stated previously, individual readers may be highly individualistic, but there is reason to believe there is a more stable underlying structure of pictorial interest due in part to commonalities of connotative referents which are learned in a visually rich society such as that found in the United States.

Communications researcher Walter Ward (1973) expressed a similar view with reference to the nature of news:

> Those involved with the present studies believe that the nature of news is more stable than most of us have suspected--much more stable than the "nature" of individual gatekeepers (p. 18).
>
> Even the most fundamental exploration uncovers the sobering notion that news--like child psychology and constitutional freedoms--is a many-sided entity that everybody KNOWS, rhetorically, but few UNDERSTAND, operationally.
>
> But the surface of news is more complex than its underlying structure. Its nature evolves from this lower-level structure, which may comprise as few as five or six news elements (p. 19)

Ward conducted pioneer research on the nature of news in his doctoral dissertation (1967). He studied newspaper city editors' Q-sorts of a pool of 54 news stories to determine commonalities and variations of news values among 10 city editors (1973, p. 26). To do so, Ward formulated a theoretical three-dimensional news model, with news elements as follows:

A. Significance

   a-1. Impact element

a-2. Magnitude element

a-3. No Impact or Magnitude

B. Prominence

b-1. Known Principals element

b-2. Unknown Principals element

C. Normality

c-1. Oddity element

c-2. Conflict element

c-3. Normal--No Oddity or Conflict (pp. 26-28)

Using this three-dimensional model, Ward found similarity among the editors rank-ordering of the news stories. He also found significant agreement among the editors on the importance of news elements in the news stories. His research concluded that for editors over-all, stories with Impact, Oddity, Conflict or Known Principals elements were played significantly higher than those without, and that stories with Magnitude items were buried or killed (pp. 37-38).

Barbara Smith (1977, p. 16) posited that if news values could be identified and empirically verified, why could not the same be done for news pictures? Smith's basic methodology and design were drawn from Ward's news study. For her study, four newsphoto dimensions, semantically different and presumably exclusive, were proposed as independent manipulated variables (p. 19). The four newsphoto dimensions and their elements were: 1. Prominence--Known Principal(s) and Unknown Principal(s); 2. Dynamism--Action and Stasis; 3. Universality--Identification and Oddity; and 4. Complexity--Simplicity and Intricacy (pp. 26-29).

Using Q-methodology to rank-order 48 newsphotos containing

combinations of elements, Smith sought to determine similarities and differences among six Oklahoma newspaper editors' photo selections, as well as any significant interactions of the four dimensions and their elements. Smith found the editors preferred Action, Oddity, Simplicity and Unknown Principals elements in newsphotos (p. 127).Contrary to the findings in previous studies, Smith's editors showed little preference for the "famous"--that is, Known Principals (p. 128).

Summary

A review of the literature on pictorial communication shows that pictures are a part of what Berlo refers to as the process of communication. There has been a lack of research on pictures, due in part to a Word orientation among researchers, and in part to the fact that pictures often are viewed as being the result of intuitive picture sense and complex technical skills. Pictures have also been thought of as being representational conveyors of reality.

It has been shown, however, that pictures convey both denotative and connotative information, and that the connotative meaning is determined by both the encoder and the receiver-viewer.

Much of the research has been directed toward psychological studies on pictorial perception, or readership studies which categorize picture interests on the basis of subject matter. Thus, the literature suggests that readers tend to see what they want to see in photographs based on individual perception needs and wants, or interests. This necessitates that an editor know a great deal about the "nature" of his reader.

Some research has indicated that facet analysis--that is, the development of semantically independent types of stimuli, or

dimensions--may be helpful in studying the underlying structure of picture interests. This research suggests there may be commonalities of picture interests which may be more stable than the individual "nature" of the readers. It is on this assumption that the present study is based.

CHAPTER III

METHODOLOGY AND DESIGN

This study attempted to improve the editorial ability of an editor of a university guide for new students to communicate pictorially through improved understanding of what readers want and need.

MacLean and Kao (1972, p.3) conceptualized the need for readership research through depiction of the model shown in Figure 1.

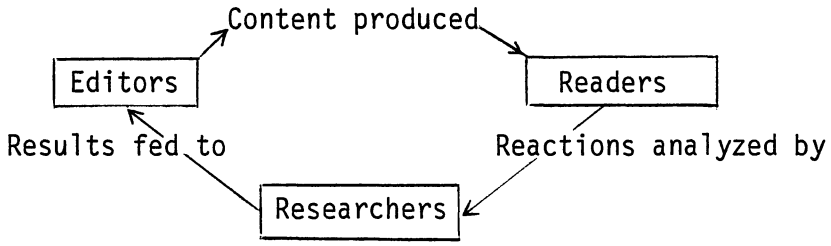

Figure 1. A Relationship Between the Editor, the Researcher, and the Audience.

> After finding out the readers' reactions, practical and functional suggestions for picture selection can be made. Thus the use of audience feedback can assist picture editors in future picture selections (MacLean and Kao).

This author attempted to study the relationships between potential university students' photo preferences and the content elements within

certain photographs. Thus, 48 photographs were selected so that all possible combinations of the operationally defined photo content elements were represented. Essentially, this study was a tryout of three predicted variables to form types of picture appeal. These three variables were Prominence, Normality, and Testimonial Quality.

The author sought to determine photo appeal by asking readers to rank-order the 48 photographs along a quasi-normal Q distribution from "Very High Interest" to "Very Low Interest." The readers were told to choose the pictures as examples of photographs which they would most like to see in an "ideal" recruitment guide for new students. It was felt the gender of the reader may affect preferences, so an equal number of males and females was selected to perform the Q-sorts.

The independent variables in this study, therefore, were the content elements in the 48 photographs selected for the Q-sort, and the gender of the sorter. The dependent variable was the subjective rank-ordering of photographs by the respondent.

This study proposes a three-dimensional photo content appeal model which contains semantically independent facets similar to Ward's (1967) three-dimensional news model, and combines facets drawn from Ward's news elements, MacLean and Hazard's (1953) subject matter groupings, MacLean and Kao's (1972) study which suggested facet analysis, Laurent's (1980) facet of Testimonial Quality, and Smith's Identification element.

Ward, after reviewing journalism textbooks and interviewing editors and reporters, eventually selected three news facets as stimuli with elements of each which were related to his dependent variable of editor responses or judgment (Ward, p. 6). Those three news value dimensions were: Prominence, Normality, and Significance. The levels of Prominence

were Known Principal(s) and Unknown Principal(s); of Normality were Oddity, Conflict, and Normal (no Oddity or Conflict); of Significance were Impact, Magnitude, and No Impact or Magnitude.

MacLean and Hazard (1953, p. 140) found that 31 of 51 pictures of a wide variety of subjects split into six major groups of interest. They were: Idolatry, Social Problems, Picturesque, War, Blood and Violence, and Spectator Sports. In the Badger Village study, MacLean and Hazard attempted to determine common factors underlying women's interest in pictures.

On the other hand, the present researcher extrapolated from these subject categories semantically independent facets. For example, both the War and Blood and Violence categories contain Conflict. Idolatry contains aspects of the Prominence facet.

MacLean and Kao (1972, pp. 137-38) suggested a structured facet analysis as a means of studying types of photographs. The intention, they suggested, would be to study "what facets, or combination of facet elements are relevant to each type and what facets make the types most different from one another." This would allow, they felt, a semantic explanation of the nature of each audience picture value type, and to combine the proper facet elements for the creation of new kinds of pictures which would provide greater appeal.

Researcher Mary Laurent (1980, p. 31) was interested in determining the characteristics of pictorial content which influenced responses to slides in a "4-H for Life" slideshow. After a review of the literature and previously existing criteria for selection of good visuals, Laurent identified three variables which she felt were relevant to influencing

persuasion. These were Technical Quality, Informativeness, and Testimonial Quality.

Laurent found that the Testimonial Quality of a slide was the major predictor of responses to slides in her study (p. 78). Testimonial Quality was defined as "to what degree the subject matter depicts the needs and values of the viewer." Laurent also reported a relationship between responses to slides and such demographic variables as sex, age, and race.

Smith (1977, p. 26) borrowed from Ward's three-dimensional news model and the perceptions of the literature's authority experts to form four semantically different dimensions of photo content. These facets and their respective elements were 1. Universality: Identification, and Oddity; 2. Prominence: Known Principal(s) and Unknown Principal(s); 3. Dynamism: Action and Stasis; and 4. Complexity: Simplicity and Intricacy.

The present study, of course, did not answer all questions of pictorial communication. Of necessity it had a restricted scope, one on which it was hoped that further research could be based. It is the nature of this type of research that parts of the total problem are usually solved in sequence (MacLean and Kao, 1972, p. 10).

The present study intentionally excluded certain photographic aspects. Reproduction aspects of tone, contrast, focus, line screens, grids, et cetra, were thought to be beyond its scope. Montages and collages were also excluded. This study looked only at individual pictures of the type which might be found in a publication used to inform and recruit new students, and which clearly represented certain combinations of the three content elements.

Technical aspects of camera handling such as lighting, lenses, depth of field, subject posing, and composition were also largely excluded. It was assumed that proper photographic techniques such as sharpness, shutter speeds, et cetera, could be used to help or hurt any picture, but this is best left to technical education and experience.

Artistic and aesthetic values of color, tone, symmetry, concentricity, et cetra, were also largely excluded because research has shown them to be less a factor in photo preferences than content (Hazard, 1960, p. 524).

The only concession to technical or artistic quality was that these could be used to produce the semantic values of the independent variables. In other words, photographic techniques may contribute to the creation of the semantically defined elements of content, but they do not in and of themselves constitute the message content. The message is what is crucial here, not the camera technique.

Using the concept of facet analysis and drawing upon a review of the literature, plus his own experience with photography, the author formed a content model for study. The model, with its respective elements: Prominence--Known Principal(s), Unknown Principal(s); Normality--Oddity, Conflict, and Normal; and Testimonial Quality--Hedonistic Empathy, Compassionate Empathy, and Routine Identification.

Definition of Photograph Content Elements

Operational definition of the three photograph content dimensions and their elements are as follows:

A. PROMINENCE: Photographs which depict any person, location, or

institution which has gained fame through media publicity, accomplishment, inheritance, association with the famous, et cetera.

1. Known Principal(s): Person, group, location, or object which is well known through past publicity or position in society and/or community.

2. Unknown Principal(s): Unknown person, group, location, object or institution--no past publicity.

Examples of Known Principal(s): Photographs of President Ronald Reagan, rock singer Michael Jackson, actor Burt Reynolds, the Grand Canyon.

The Prominence factor presented a problem in both definition and design. There was the risk that the readers who would be asked to perform the Q-sorts might not recognize the principal as prominent. Therefore, it was necessary that the prominence of the principal in the photograph would have to be clarified beyond doubt. Two efforts were made to solve this problem:

1. Pictures were selected of persons, objects, or locations which would be recognized "beyond a doubt"--the President of the United States, the Grand Canyon, popular actors or actresses or singers.

2. The principal in each picture was identified by a single cutline underneath the photograph. The wording of the cutline was chosen to convey the necessary identification in semantically neutral wording.

B. NORMALITY: Pictures involving Oddity, Conflict, or Normal situations.

1. Oddity: Pictures which portray any action, event, or subject that is highly unusual. Generally the action or event has a "twist"--that is, it is different from the day-to-day turn of events...or opposite from what we have learned to expect, and thus, predict in our culture and society. Lack of precedent, generally, though not necessarily, is indicated. This will include oddity created by trick photography to create images which would not occur in our normal expectations of reality.

2. Conflict: Pictures which portray any open clash between persons, groups, animals, organizations, or involving a clash

of any of these four against nature. The clash can be either verbal or physical. The conflict must be obviously intense, with distinct "movement against" by one or both opposing forces.

3. Normal: Pictures which portray actions or events not unusual enough to be considered an Oddity or movement against not intense enough to be considered as Conflict.

Example of Oddity: A picture depicting a man with hair of numerous light bulbs rather than normal hair, a photo of a gorilla cuddling a kitten.

After examination of several dozen publications aimed at recruiting new students, the author decided that it was highly unlikely that pictures portraying the Conflict element would be used to inform and recruit new students. Although the Conflict element would be valid in a news-type publication, it was decided not to include it in this study.

C. TESTIMONIAL QUALITY: Picture content evokes a strong hedonistic or compassionate participation, emotionally, of the viewer with the action or subject of the photograph.

1. Hedonistic Empathy: Dramatic pictures of actions, persons, objects, or locations which contain "beyond a doubt" picturesque hedonism. These photos bring vicarious pleasure, or portray a mood of strong good feeling. Hedonism is defined as "the doctrine that pleasure is the principal good and the proper aim of action." Picture subject may be leisure, entertainment, beauty, or persons at work as long as the emotional qualities are strongly pleasurable, or the image is picturesque.

2. Compassionate Empathy: Picture content is of subjects which evoke a compassionate or concerned mood. The emotional appeal must evoke strong sorrow, pity, or sadness, a wish to help.

3. Routine Identification: Picture of any person, group, object, location, or event that is part of normal daily life for an average person's experiential world. The day-to-day turn of events--as long as they possess neither of the above elements of Hedonistic Empathy or Compassionate Empathy--that we have learned to expect in our culture, in our time, and which we can identify as usual and predictable.

Examples of Hedonistic Empathy: Picturesque--a dramatic picture of a sunset, a silhouetted hang glider against a setting sun.

Hedonistic--a picture of an attractive perspiring man holding a soft drink against his face, a picture of a laughing baby.

Examples of Compassionate Empathy; A picture of a crying child receiving an immunization shot from a doctor, a photo of a pair of football players walking off the playing field crying, a picture of a veterinarian helping an injured animal.

The Testimonial Quality elements posed a problem in the research design of this study. The intent of this dimension was to test the appeal of pictures which created an emotional mood, either strongly pleasurable or strongly compassionate. The Hedonistic Empathy element was particularly difficult to define. The important aspect of this element was that the content of the picture must contain vicarious pleasure. It was felt necessary to combine the concepts of picturesqueness with hedonism because both, in a photograph, imply good feelings.

It was also felt necessary in defining these elements to include an aspect of intensity to separate photos of this category "without a doubt" from photos which would belong in the Routine Identification category. Therefore, the definitions require the content to be strong in creating a mood of pleasure or compassion. Thus, while football, for instance, may be hedonistic for most people, the picture cannot simply portray the sport, but must be dramatic as well.

Since not everyone might agree on what is hedonistic, or compassionate, it was necessary of select only those pictures which clearly would be interpreted as pleasurable or compassionate by most individuals in American society.

Photo Content Element Combinations

As noted above, the element of Conflict was deleted from study in this research, as it was felt that photographs containing that element would not be considered in the editorial selection process for inclusion in a guide for new students.

Therefore, the 2 X 2 X 3 three-dimensional design employed in this study contained 12 possible combinations of content elements. That is, 12 photographs were required to incorporate each content element and/or combinations thereof.

All possible combinations of the content elements were represented in 48 photographs. Four photographs from each combination were used as Q-items in this study to determine the interest hierarchy of the content elements among the respondents. The 12 possible combinations of content elements are:

1. Known Principal(s), Oddity, and Hedonistic Empathy
2. Known Principal(s), Oddity, and Compassionate Empathy
3. Known Principal(s), Oddity, and Routine Identification
4. Known Principal(s), Normal, and Hedonistic Empathy
5. Known Principal(s), Normal, and Compassionate Empathy
6. Known Principal(s), Normal, and Routine Identification
7. Unknown Principal(s), Oddity, and Hedonistic Empathy
8. Unknown Principal(s), Oddity, and Compassionate Empathy
9. Unknown Principal(s), Oddity, and Routine Identification
10. Unknown Principal(s), Normal, and Hedonistic Empathy
11. Unknown Principal(s), Normal, and Compassionate Empathy
12. Unknown Principal(s), Normal, and Routine Identification

The Q-Sample: 48 Pictures

The 48 photographs used in this study were chosen from publications produced by institutions of higher education insofar as was possible. Some photographs were chosen from Life magazine, People magazine, and other consumer magazines. Special care was taken to ensure that the pictures would be of the type a reader might expect to find in a typical prospective-student publication of an institution of higher education.

Care also was taken to select pictures encompassing a wide range of subject matter, so as to determine if content appeal was independent of the subject source, that is, dependent on the message content, not the subject.

The pictures used were selected after a screening process which allowed the author to be relatively sure each photograph contained a certain combination of photo-content elements. The 48 photographs were selected by a panel of six judges, five working in the production of photographic and/or editorial materials at Oklahoma State University. The sixth judge was the director of public relations for an area vocational technical education school.

From a pool of 96 photographs, the 48 pictures finally selected received the highest agreement that they most strongly contained the desired combination of content elements.

The pictures were clipped from the magazines and reproduced in black and white form, as close to 4 X 5 inches as possible. The label or caption for each picture was removed prior to reproduction. The pictures then were mounted on 5 X 8 inch white pieces of cardboard. A semantically neutral label identifying the subject was typed on the

card. Each card was given an identifying number on the back.

The Respondent Sample

Twenty high school seniors from two Oklahoma high schools were asked to rank-order the photographs along an eleven point continuum from "Very High Interest" to "Very Low Interest." The schools were located in Stillwater and Perkins, Oklahoma. Senior class size ranged from 273 at Stillwater High School to 61 at Perkins-Tryon High School. Ten respondents were selected from each school.

Since a review of the literature (MacLean and Hazard, 1953; Laurent, 1980) suggested relationship between responses and sex, or gender, might be observed, an equal number of male and female respondents was selected. Therefore, five male and five female respondents were chosen from each senior class.

Due to time and travel limitations, one of the criteria for selection of the respondents was that they, and their schools, be within a reasonable distance from the researcher's home base. It was hoped the researcher would be able to achieve a more heterogeneous sampling mix by selecting respondents from the two schools. Respondents were chosen at random from a list of each senior class.

The students were contacted by the researcher by phone, asking them to participate by Q-sorting the 48 photographs. Demographic data of the respondents was obtained through a questionaire filled out during the Q-sort interview.

Hypotheses

Some of the hypotheses presented in this study were related and/or

taken from the research studies of Ward and Smith. It should be noted that this study was designed to learn the relationships between the content elements and the photo interests of potential new college students who might reasonably be expected to see a recruitment publication. Therefore, the following hypotheses are presented:

1. Mean ranking, or interest, for photos containing Known Principal(s) will be greater than the mean ranking, or interest, for photos containing Unknown Principal(s).

2. Mean ranking, or interest, for photos containing Oddity will be greater than mean ranking, or interest, for photos containing no Oddity (the Normal element).

3. Mean ranking of photos containing either the Hedonistic Empathy or the Compassionate Empathy elements will be higher than mean ranking, or interest, in photos containing Routine Identification.

4. Mean ranking of photos containing Oddity will be greater than mean ranking, or interest, in photos containing Known Principal(s), Hedonistic Empathy, or Compassionate Empathy.

5. Mean ranking of the photo elements will not differ significantly among male and female respondents.

Q-Methodology

This study employs Stephenson's (1953) Q-methodology to test the above hypotheses. Essentially, Q-technique centers in sorting decks of cards, called Q-sorts, and in correlations among responses of different individuals.

This methodology was selected as the basis for design of this study because of its characteristic attributes and due to the fact that

reliable results have been demonstrated in its use in other research of this type (MacLean and Hazard, 1953; MacLean and Kao, 1972; Hazard, 1960; Ward, 1967; Smith, 1977; Laurent, 1980).

One of the most important attributes of Q-methodology is its orientation to research on the individual (Kerlinger, 1973, p. 582). It provides a systematic method to test a person's ideas, notions, beliefs, attitudes, opinions, or wishes--that is, the values with which individuals identify themselves (MacLean and Kao, p. 11). This identification aspect is an important issue in this study because it has been suggested in other research that people react favorably to pictures having content with which they feel identification (Hightower, 1976). This methodology scientifically studies the inner experiences of the readers, which may help editors to develop a "feel" for their preferences.

Q-technique, of necessity, is suited best to testing theories on small sets of individuals carefully chosen for their known or presumed possession of some significant characteristic or characteristics (Kerlinger, p. 582). Kerlinger points out an important limitation of Q-technique. While Stephenson (pp. 193-194) argues vigorously against this point of view, Kerlinger states there is no escaping the inability of the researcher using Q to generalize to populations of individuals, therefore requiring cross-sectional supplementation to test theory on larger numbers of individuals. The present study, however, seeks merely to present a new pictorial communication model, and therefore will not generalize to a broader population.

Q-sorting is mainly a sophisticated way of rank-ordering objects, stimuli, along a quasi-normal frequency distribution, and then assigning

numerical values to the objects for statistical purposes. Kerlinger (p. 595) points out another criticism of Q in that it, being a forced-choice procedure, violates the independence assumption--that is, the placement of one card on the continuum, of necessity, affects the placement of the other cards. Kerlinger mitigates this criticism by calling for raised requirements for statistical significance from the .05 level to the .01 level of significance. Kerlinger also suggests that subjects be told they can always move any card or cards from one pile to another until they are satisfied that they have ended the sorting procedure as accurately as possible.

Q-Sorting

In this study, senior high school students ranked the 48 photographs on an eleven-point continuum ranging from "Very High Interest" to "Very Low Interest." The following array made up a quasi-normal distribution:

TABLE I

FREQUENCY DISTRIBUTION OF THE 48 PHOTOGRAPHS AND THEIR ASSIGNED VALUES

Very High Interest										Very Low Interest
Assigned Values	11	10	9	8	7	6	5	4	3	2	1
No. of Items	2	3	4	5	6	8	6	5	4	3	2

The "Assigned Values" are numerical values assigned to the pictures in each of the 11 piles of photographs. The "No. of Items" refers to the number of photographs to be placed in each stack along the continuum. All statistical analyses were based on the resulting scores.

Briefly, the Q-sorting procedure used in this study can be described as follows (see Appendix B for detailed instructions):

The subject is presented the set of 48 pictures and asked to look through the whole set of pictures and divide them into three piles: one pile of pictures of best liked pictures, one pile which are liked least, and a pile in the middle for those in-between, or are undecided. The subject is then asked to sort these piles of pictures again into the forced distribution given above. The interviewer records the pictures and gives 11 points for each picture in the most liked pile, one point for each picture in the least liked pile, and values shown above are assigned to each pile in between.

In summary, the Q-sort is a rank-ordering of Q-items according to an emphasized condition of instruction. The sort can be used to reflect a person's habitual modes of behavior by systematically testing a person's attitudes, ideas, notions, beliefs or opinions (MacLean and Kao, p. 23). This study's sorts reflected similarities and differences of potential reader attitudes on three content dimensions toward pictures which might be used in a university's guide for new students.

The Analysis

The factorial design of this study included two levels of subject gender and three dimensions of pictorial content appeal: Prominence, Normality, and Testimonial Quality.

Analysis of variance was used to study the main and interactive relationships of the three content dimensions and their elements, and gender, on photo preferences.

Factorial analysis of variance was used because the independent variables--the three content dimensions, and gender of respondents--may vary independently or interact with each other to produce variation in the dependent variable--the rank-ordering of photographs (Kerlinger, p. 245). Specifically, this study used a mixed model multi-factor analysis of variance design, with a fixed factor of gender, and repeated measure on the three content dimensions. Table II shows a 2 X 2 X 3 X 2 analysis paradigm to reveal how the levels of independent variables were juxtaposed for the analysis of variance.

This multi-factor design allowed the author to extract differences in the interest scores due to content elements, separately or in combination, and their interactions with the sex of the respondents.

Analysis of the mean scores for the picture content elements allowed the author to tell if there were significant differences among the content elements, for example, did the respondents rank pictures containing Oddity higher than pictures that did not contain Oddity?

Finally, the author was able to determine if there were any significant differences on over-all ranking of content dimension elements by gender, or sex, of the respondents.

TABLE II

FOUR-FACTOR ANALYSIS PARADIGM OF CONTENT DIMENSION ELEMENTS AND GENDER

	PROMINENCE											
	Known Principal(s)						Unknown Principal(s)					
	NORMALITY											
	Oddity			Normal			Oddity			Normal		
	TESTIMONAIL QUALITY											
	Hedonistic Empathy	Compassionate Empathy	Routine Identification	Hedonistic Empathy	Compassionate Empathy	Routine Identification	Hedonistic Empathy	Compassionate Empathy	Routine Identification	Hedonistic Empathy	Compassionate Empathy	Routine Identification
Males												
Females												

CHAPTER IV

RESULTS

Twenty high school seniors Q-sorted 48 photographs along an eleven-point continuum according to how well they liked those pictures (See Appendix B). Ten males and ten females were chosen to participate in sorts of identical sets of photographs--each set being shuffled differently in picture placement within the deck to eliminate possible effects due to position.

The author then used three factor analyses of variance with a fixed factor of gender, and repeated measures on two photo content dimensions each time to determine similarities and differences of picture appeal.

The three pictorial content dimensions and the gender of the respondent were the independent variables, with the ranking of the photographs--picture interest--being the dependent variable. The author was able to determine significant differences of picture appeal among content elements and ranking of the content elements by the sex of the respondent.

The content dimensions were defined in Chapter III as being: PROMINENCE, with two levels--Known Principal(s) and Unknown Principal(s); NORMALITY, with two levels--Oddity and Normal (no Oddity); and TESTIMONIAL QUALITY, with three levels--Hedonistic Empathy, Compassionate Empathy, and Routine Identification.

Drawing certain conclusions from a review of available literature

on prior research, the author hypothesized that presence of these pictorial content dimensions would make a significant difference in the appeal of photographs among high school seniors.

The Appeal of Photographs Based on Photo Content Elements

Three multivariate analyses were employed to determine main and interactive effects of content elements in photographs by gender types, as follows:

1. PROMINENCE X TESTIMONIAL QUALITY X GENDER
2. NORMALITY X TESTIMONIAL QUALITY X GENDER
3. PROMINENCE X NORMALITY X GENDER

The mean interests of the 12 content element combinations by male and female respondents were computed and are shown in Table III. Each cell of Table III contains the mean interest for all four photos which were examples of a particular combination of elements, ranked by the ten respondents of that gender type.

As mentioned, it was the author's intent to determine to what extent, if any, the seniors' interests were affected by presence of Known Principal(s), Oddity, Hedonistic or Compassionate Empathy in photographs. While the above-listed analyses allowed determination of interest in one content element versus another,--for example, Oddity versus no Oddity--it also provided a tool to determine whether appeal of one content element depended upon its combination with one or more of the mutually independent elements. Did a combination of one element with another result in a higher or lower mean interest score than did the content element alone?

For example, from the Prominence X Testimonial Quality X Gender

TABLE III

MEAN INTEREST OF ALL CONTENT ELEMENTS BY GENDER

	PROMINENCE											
	Known Principal(s)						Unknown Principal(s)					
	NORMALITY											
	Oddity			Normal			Oddity			Normal		
	TESTIMONAIL QUALITY											
	Hedonistic Empathy	Compassionate Empathy	Routine Identification	Hedonistic Empathy	Compassionate Empathy	Routine Identification	Hedonistic Empathy	Compassionate Empathy	Routine Identification	Hedonistic Empathy	Compassionate Empathy	Routine Identification
Males	5.90	5.45	7.78	6.68	5.70	6.15	6.33	4.93	6.00	7.20	4.93	4.98
Females	6.05	6.55	5.68	6.30	5.98	5.90	6.85	4.78	6.40	7.13	6.13	4.28

analysis it was possible to isolate the effects on interest due to Known Principal(s) and Unknown Principal(s); the effects on interest due to Hedonistic Empathy, Compassionate Empathy, and Routine Identification; the effects on interest when Prominence and Testimonial Quality elements were combined; and the variations in picture interest due to gender interaction with the elements.

Over-all, no significant differences were found between male and female preferences for any photo element combination. That is, gender did not interact with any of the photo elements to create significant increases or decreases in mean picture interest. This will be discussed in more detail later.

Prominence Main Effects

No significant differences were found in over-all main effect of the Prominence dimension elements. That is, over-all appeal of a picture did not seem to be based on the picture depicting a Known Principal as opposed to an Unknown Principal ($F=2.19$, $df=1/18$: $p \geq .05$).

Half of the pictures contained Known Principal(s) and half Unknown Principal(s). Mean interest of pictures with these elements are shown in Table IV.

While the mean interest of photos containing Known Principal(s) of 6.18 was slightly higher than mean interest for Unknown Principal(s) of 5.82, this difference was not significant. A difference of only .36 could have occurred by chance alone more than five times in a hundred.

Although these results may be somewhat surprising in light of the findings of MacLean and Hazard (1963), Ward (1973), and Badii (1976) which indicated that picture or story interest was influenced by the

Prominence of the subject, perhaps the comments of some respondents might provide some insight into the lack of significance between the Known and Unknown Principal(s) elements in this case.

TABLE IV

MEAN INTERESTS OF PROMINENCE AND TESTIMONIAL QUALITY DIMENSION ELEMENTS IN PHOTOS

	TESTIMONIAL QUALITY			
PROMINENCE	Hedonistic Empathy	Compassionate Empathy	Routine Id.	Mean Totals
Known Principal(s)	6.23	5.92	6.38	6.18
Unknown Principal(s)	6.85	5.19	5.41	5.82
Mean Totals	6.54	5.56	5.90	6.00

There were great differences among the individual students on interest of pictures containing Known Principal(s) or Unknown Principal(s). However, the interest in a certain known principal seems to be highly individualistic. For example, one respondent ranked a

picture of Lionel Richie (No. 57, see Appendix C) as one of the best liked pictures, saying that she liked him and the picture of him. Another respondent chose the picture of Richie as one of the least interesting because, "I don't care much for his music or his picture." Between these two students, therefore, this picture received a mean interest of 6.00, which is a sign of indifference toward that picture over-all.

One respondent chose pictures which all contained Known Principals in the most interesting pictures and the least interesting spots. On picture No. 4 of Clara Peller, the "Where's-the-beef?" lady, he commented, "This idea was run into the ground. You can only see something so many times before you hate it."

Likewise for picture No. 58 of Mary Lou Retton, he said, "I'm so tired of seeing her fat little face." On the other hand, of picture No. 86 of President Reagan he commented, "I like President Reagan. He is one of my favorite people." Of picture No. 87 he wrote he liked this picture "because it was very exciting, and also I like the Statue of Liberty." Among his best-liked and least-liked pictures, these four Known Principal(s) and Unknown Principal(s) photographs netted a mean of 6.00 over-all.

Other comments included, "....a person millions would love to have the chance to be in her shoes." (picture No. 42, of Mary Decker), and "The Statue of Liberty always checks my eye." (picture No.87).

Based solely on the subject being known may not increase readership, because individual reader interest may cancel out likes or dislikes of a particular known principal. On the other hand, there is

some indication that Known Principals do draw attention, although the reader may dislike the Known Principal(s).

Testimonial Quality Main Effects

One third of the pictures in the pool of 48 contained Hedonistic Empathy, one third Compassionate Empathy, and one third Routine Identification. These elements comprised the Testimonial Quality dimension of picture interest, means of which also are shown in Table IV.

There were significant differences of interest in pictures containing Hedonistic Empathy, Compassionate Empathy, and Routine Identification ($F=3.48$, $df=2/36$; $p<.05$). That is, there was a significant difference somewhere between mean interest in Hedonistic Empathy, at 6.54; Compassionate Empathy, at 5.56; and Routine Identification, at 5.90,--a difference which would be expected to occur by chance less than five times in a hundred similar experiments.

Post hoc "gap tests" for three or more variables was used to compare differences between the over-all means of all pairs of elements. A critical difference of more than 0.72 was considered significant. The tests revealed a significant difference only between the interest in Hedonistic and Compassionate Empathy. There appeared to be no significant difference between interest in pictures containing Compassionate Empathy and Routine Identification. In addition, the difference in interest in Hedonistic Empathy and Routine Identification was not significant, although the mean interest of Hedonistic Empathy was higher.

This would indicate that the respondents tended to reject pictures

containing the Compassionate Empathy element, and preferring those containing Hedonistic Empathy.

Respondent comments generally tended to confirm these findings. These seemed to reflect differences in the appeal of positive emotion, negative emotion, and no emotion. For instance, one respondent rejected picture No. 32 of a boy with artificial legs because "Pictures of crippled people do not seem to give off a positive feeling. This picture gives a feeling of pain and sadness, and no one likes that." Of picture No. 11 depicting a man in a wheelchair on a football field, the respondent commented, "The man....seems to be wishing he could play football. I don't enjoy seeing people that are not happy."

Another, student said picture No. 28 of a man tagging the ear of a fox pup "is revolting. Whatever this man is doing to this animal is evidently causing it great pain." Comments on many low-interest pictures of the pictures mentioned words such as "depressing", "hurts", "hopeless", and "suffering".

Conversely, students indicated a preference for "happy", "good", "fun", and "festive" pictures. Of picture No. 68, depicting a student leaping through sprinkler spray, a respondent said, "This showed the 'fun' of school, or letting go. The student shows excitement." Picture No. 36 of balloons was "festive." Picture No. 65 of a smiling graduating student elicited this comment from one respondent, who, himself was graduating from high school, "This picture shows an important point in a person's life, with a lot of good emotion."

Of pictures which contained Routine Identification--and selected as having Very Least Interest--the term "boring" seemed to be most used in respondent comments for pictures. However, as discussed later, interest

in pictures containing Routine Identification were affected significantly by interaction with elements in both the Normality and Prominence dimensions.

While results tended to indicate the students preferred pictures containing Hedonistic Empathy to those containing Compassionate Empathy, only 10 percent of the total variation in picture interest scores was explained by manipulating the Testimonial Quality of the picture.

Prominence and Testimonial Quality Interaction

Although there was no significant difference in interest in Known and Unknown Principal(s) over-all, when combined with the elements of Testimonial Quality, significant differences did result, indicating that the interaction affected mean interest ($F=17.02$, $df=2/36$, $p<.001$). However, this relationship was weak, explaining only eight percent of the total variance.

Mean interest in the elements of Prominence combined with the Testimonial Quality elements are shown in Table IV, as noted earlier.

Again, post hoc "gap tests" were employed, with the critical difference being 0.41 for significance. Table IV shows that, while little difference existed between Known Principal(s) and Unknown Principal(s) elements over-all, Known Principal(s) received substantially higher interest than Unknown Principal(s) when combined with Compassionate Empathy (5.92 vs. 5.19), or Routine Identification (6.38 vs. 5.41). However, mean interest was significantly higher for Unknown Principal(s) when combined with Hedonistic Empathy.

The author noted previously that readers generally preferred pictures containing Hedonistic Empathy over those containing

Compassionate Empathy. The interaction indicates that combining a known principal with Compassionate Empathy or Routine Identification can increase the interest significantly over pictures containing an unknown principal and either of these.

These findings seem to support the practice of using celebrities to elicit aid for disadvantaged third-world children, where the picture of an actor or actress is used in conjunction with that of a sad looking, dirty child.

In addition, this interaction indicates that a known principal might increase the interest of an otherwise mundane or boring picture containing Routine Identification, although this does not necessarily mean a photograph of this type is preferred to those containing Hedonistic Empathy or Compassionate Empathy.

Pictures containing Unknown Principal(s) drew significantly higher interest than those containing Known Principal(s) when combined with Hedonistic Empathy. This might seem unexpected, but might be due to the fact that the appeal of known principals seems to be individualistic in nature--that is, some people may like a certain known principal while others may dislike that known principal. This could lead to negative appeal of a celebrity, negating the appeal of a picture also containing Hedonistic Empathy. For instance, picture No. 58 of Mary Lou Retton drew individual rankings for being both very high and very low in interest. Picture No. 55 of Cher drew fairly consistent low rankings. Both pictures contained Known Principal(s), Normal, and Hedonistic Empathy.

It would seem that while interest in pictures containing Known Principal(s) draw more interest will than Unknown Principal(s) when combined with Compassionate Empathy or Routine Empathy, picture

interests diminish if Known Principal(s) is combined with Hedonistic Empathy.

Normality Main Effects

From the three-factor analysis of Normality X Testimonial Quality X Gender the author was able to isolate differences in interest between both the Oddity and Normal elements, and test for interaction of these elements with the Hedonistic Empathy, Compassionate Empathy and Routine Identification elements.

TABLE V

MEAN INTEREST IN NORMALITY AND TESTIMONIAL QUALITY DIMENSION ELEMENTS IN PHOTOS

	TESTIMONIAL QUALITY			
NORMALITY	Hedonistic Empathy	Compassionate Empathy	Routine Id.	Means Totals
Oddity	6.28	5.43	6.47	6.06
Normal	6.83	5.68	5.33	5.95
Mean Totals	6.56	5.56	5.90	6.00

Over-all, there was no significant difference in students' interest

in pictures containing the Oddity or Normal (no Oddity) elements. Twenty-four pictures in the Q-deck contained Oddity, and 24 did not. Mean interest scores of the elements are shown in Table V.

The mean interest in photographs containing Oddity, 6.06, was not significantly different from the mean interest of those containing no Oddity (Normal). A difference this small would occur more than five times in a hundred by chance alone ($F=0.24$, $df=1/18$, $p>.05$). Students preferred neither element, Oddity or Normal, over the other, over-all.

Normality and Testimonial Quality Interaction

Though no significant difference, over-all, was shown in interest between Oddity and no Oddity, when these elements were combined with the elements of Testimonial Quality, significant differences occurred, indicating an interactive effect on mean interest ($F=29.85$, $df=2/36$: $p<.001$). This interaction explained eight percent of the total variance.

Table V shows that pictures containing the Normal element received significantly higher mean interest than those containing Oddity when combined with Hedonistic Empathy, 6.83 vs. 6.28. Conversely, interest in Oddity was higher in photographs containing Routine Identification. That is, mean interest for photographs containing Oddity and Routine Identification was significantly higher than for photos containing Normal and Routine Identification, 6.47 vs. 5.33.

When Oddity was included in pictures containing Compassionate Empathy no significant difference in mean interest was revealed compared to pictures containing Compassionate Empathy and no Oddity, 5.43 vs. 5.68.

Considering the element of Routine Identification in photographs,

it seems interest was higher when this element was combined with either Known Principal(s) or Oddity than when it stood alone. Indeed, one picture--No. 87 of the Statue of Liberty and lightning--consistently drew high interest. That photograph contained Known Principal(s), Oddity, and Routine Identification.

On the other hand, mean interest appeared to diminish if either Oddity or Known Principal(s) was combined with Hedonistic Empathy.

TABLE VI

MEAN INTEREST IN PROMINENCE AND NORMALITY DIMENSION ELEMENTS IN PHOTOS

	PROMINENCE		
NORMALITY	Known Principal(s)	Unknown Principal(s)	Means
Oddity	6.23	5.88	6.06
Normal	6.12	5.77	5.95
Means	6.18	5.83	6.01

Interaction of Normality and Prominence

The author already stated that students did not differentiate between the elements of either Normality or Prominence when these

elements were considered alone. Did the combination of the Oddity or Normal elements in photographs with Known Principal(s) or Unknown Principal(s) significantly raise or lower mean interest?

Table VI shows the mean interest in Prominence elements when combined with the Normality elements. Interaction analysis indicated combining elements of these two dimensions of photo content had no significant effect. That is, the combination of elements produced neither significant increases, nor decreases in mean interest ($F=0.01$, $df=1/18$: $p.>.05$). The mean interest of the four combinations of Prominence and Normality elements were not different enough to exceed what might be expected by chance. This indicated the effects of these dimensions on reader interest were independent.

Gender and Interest

As mentioned earlier, there was no differentiation between male and female picture interests due to the manipulation of the three pictorial content dimensions.

For instance, the analyses of variance revealed no significant differences in mean interests of males and females on the Prominence dimension ($F=0.64$, $df=1/18$: $p>.05$). Table VII shows mean picture interest of the Prominence, Normality, and Testimonial Quality elements by Gender--male and female.

Both males and females tended to show higher interest in pictures containing Known than for Unknown Principal(s), but this difference was not significant.

Additionally, male and female mean interests did not differ significantly on the Normality dimension ($F=0.00$, $df=1/18$: $p>.05$).

TABLE VII

MEAN INTEREST IN PROMINENCE
NORMALITY, AND TESTIMONIAL
QUALITY BY GENDER

	GENDER		
	Males	Females	Means Totals
PROMINENCE			
Known Principal(s)	6.28	6.02	6.15
Unknown Principal(s)	5.78	5.91	5.85
Means	6.03	5.97	6.00
NORMALITY			
Oddity	6.07	6.05	6.06
Normal	5.94	5.95	5.95
Means	6.01	6.00	6.00
Testimonial Quality			
Hedonistic Empathy	6.53	6.58	6.56
Compassionate Empathy	5.25	5.86	5.56
Routine Identification	6.23	5.57	5.90
Means	6.00	6.00	6.00

The mean interest of 6.07 vs. 6.05 on the Oddity element for males and females, respectively, and 5.94 vs. 5.95 on the Normal element

showed almost identical interest for each element.

Finally, females tended to rank photographs containing Compassionate Empathy higher than did males, 5.86 vs. 5.25, and males to rank photographs with Routine Identification higher than did females, 6.23 vs. 5.57. Notwithstanding, these differences could have occurred by chance ($F=1.49$, $df=2/36$: $p>.05$).

None of the analyses of Gender combined with any two of the content dimensions revealed significant interactions: Gender X Prominence X Testimonial Quality interaction was not significant ($F=2.05$, $df=2/36$: $p>.05$); Gender X Normality X Testimonial Quality was not significant ($F=3.15$, $df=2/36$: p .05); and Gender X Prominence X Normality was not significant ($F=0.26$, $df=1/18$: $p>.05$).

In summary, analyses of content dimension elements in photographs showed that presence of Testimonial Quality had a significant differential effect on picture interests of high school seniors.

These seniors showed a preference for Hedonistic Empathy, while rejecting pictures containing Compassionate Empathy. In addition, while the presence of Prominence or Normality in a photograph had no significant over-all effect on picture interests, presence of Known Principal(s) significantly raised the interest means of photographs that also contained Routine Identification or Compassionate Empathy.

The presence of Oddity in a photograph increased the interest of pictures which contained Routine Identification over those containing Normal and Routine Identification. However, interest in pictures containing Hedonistic Empathy was diminished if the picture also contained either Known Principal(s) or Oddity.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Introduction

This was an exploratory study to identify and test elements of picture content appeal which lie behind the urge to "read" photographs in university or college recruitment publications.

That goal was pursued by proposing a basic theory of pictorial content based on three content dimensions which were thought to act singly or in concert to predict the underlying values of picture appeal. It was assumed it might be possible to use these semantically independent dimensions to identify patterns of photo content preferences which would function cross-sectionally for pictures of any subject content.

The effects of color, size, shape or technical quality were not under study. All pictures were in black and white and approximately the same size--as close to 3 1/2 X 4 1/2 inches as possible.

The three-dimensional photo value model was structured with 12 possible combinations of content dimension elements. Four photographs were selected by judges for each combination, yielding a total of 48 photographs used in the study.

Subject matter of the selected photographs ranged across art,

glamour, sports, political figures, fame, social problems, pain and suffering, joy, off-beat, patterns, and science.

This study also attempted to determine similarities and differences between male and female high school seniors in their photo preferences.

Information was sought to provide knowledge, first to editors of institutional publications, and second to photographers. It was felt editors would benefit by enabling them to make better choices of photographs for publication through information gained about their intended audience. As MacLean and Kao (1973) pointed out:

> An editor's ability to predict depends upon his understanding of a reader and, most important, his intelligence in generalizing from his understanding of his reader a response system and applying his generalizations to a new set of stimuli (p. 135).

MacLean and Kao found that when editors have insufficient or inaccurate information about their audiences, they are unable to make accurate predictions (p. 132).

Summary

To determine interest in pictorial content element combinations in the photos, 20 high school seniors were selected to rank order, or Q-sort, the 48 photographs along an 11-point continuum ranging from "Very High Interest" to "Very Low Interest." Ten males and 10 females "sorted" identical sets of pictures.

The independent variables were gender and the three pictorial content dimensions. The dependent variable was the level of interest assigned each combination of elements.

The three dimensions and their elements were:

A. PROMINENCE

a1. Known Principal(s)

a2. Unknown Principal(s)

B. NORMALITY

b1. Oddity

b2. Normal (no Oddity)

C. TESTIMONIAL QUALITY

c1. Hedonistic Empathy

c2. Compassionate Empathy

c3. Routine Identification (none of H.E. or C.E.)

These photo value dimensions were based upon and/or extrapolated from MacLean's (1963 and 1973) newsphoto studies, Ward's (1973) news story elements studies, Smith's (1977) newsphoto Q-sorts, and Laurent's (1980) thesis research on 4-H members' photo preferences. In all of these studies, as in this current study, Q-methodology was employed.

Three-factor analyses of variance with repeated measures were rotated on gender, two factors each time to explore the similarities and differences in respondent photo interests.

The over-all interest in content elements showed the high school students preferred, in order: Hedonistic Empathy, 6.56; Known Principal(s), 6.18; Oddity, 6.06; Normal, 5.95; Routine Identification, 5.90; Unknown Principal(s), 5.82; and Compassionate Empathy, 5.56. The reader of this thesis is cautioned not to rely on these simple means too greatly in determining the students' picture content preferences, because misleading conclusions might result.

For instance, absolute mean interest scores might lead one to think respondents preferred Known Principal(s) over Unknown Principal(s). This

was not the case. Analysis of variance showed the difference between over-all means was not significant. That is, there were no main effect differences between Known and Unknown Principal(s).

Likewise, over-all difference of interest in Oddity and Normal elements were insignificant. Differences as small as these could have occurred by chance more than five times in a hundred.

The only significant differences occurred between the mean interest in Testimonial Quality elements, Hedonistic Empathy and Compassionate Empathy. Analysis revealed these high school seniors preferred the pleasantness, enjoyment, or picturesque qualities of Hedonistic Empathy. The pictures they disliked were the sad, sorrowful, or unpleasant qualities of Compassionate Empathy. Students tended to prefer the Routine Identification element over Compassionate Empathy, but this tendency was not significant at the .05 level. Nor was the preference for Hedonistic Empathy significantly higher than for Routine Identification.

The appeal of Prominence and Normality depended upon the Testimonial Quality elements.

While respondents generally showed no preference for Known over Unknown Principal(s), interaction showed the mean interest for photographs with Known Principal(s) was significantly higher than that received for photos with Unknown Principal(s), if Compassionate Empathy or Routine Identification was also included in the picture. Conversely, mean interest was higher for Unknown than for Known Principal(s) if the picture also contained Hedonistic Empathy.

The study showed there was no overall preference for photographs with Oddity over those without. However, analysis showed significant

preference for Oddity if the picture also included Routine Identification. Mean interest for the Oddity-Routine Identification combination was 6.47 versus 5.33 for the Normal-Routine Identification combination. Conversely, interest in Oddity in photographs dropped significantly if the picture also contained Hedonistic Empathy. Mean interest for the Oddity-Hedonistic Empathy combination was 6.29 versus 6.83 for the Normal-Hedonistic Empathy combination.

Variance analysis in indicated no significant interaction of the elements of Prominence and Normality, indicating the effects of Prominence and Normality acted independently on reader interest. That is, interest in photographs containing an element of one did not depend upon an element of the other being present.

There was no interaction of Gender with any of the three pictorial dimensions. Past research by Woodburn (1947), MacLean and Hazard (1953), Swanson (1955), and Laurent (1980) indicated a difference in picture interests among males and females.

These studies dealt primarily with the subject matter of picture content. This author, however, hypothesized that if the researcher could actually develop content dimensions which truly measure the underlying values of picture interest, there might be no differences observed between the sexes' interests if they both infer connotative meaning from a consistent or standard stock of signs. Lack of interaction of gender and the content dimensions seems to lend some support to such an hypothesis.

Testing the Hypotheses

Hypothesis No. 1

This hypothesis stated the mean interest in photos with Known Principal(s) would be greater than mean interest in photos containing Unknown Principal(s). This hypothesis was not supported.

The F-ratio for Known and Unknown Principal(s) showed the difference in mean interests insignificant. There was a tendency for the students to rank Known Principal(s) higher, but not beyond chance expectations.

When the elements of Prominence were combined with those of Testimonial Quality, the hypothesis still was negated. Although the students preferred Known Principal(s) when combined with Compassionate Empathy or Routine Identification, the students preferred Unknown Principal(s) when combined with Hedonistic Empathy.

Hypothesis No. 2

This hypothesis stated interest in photographs with Oddity would be greater than that in photos containing no Oddity (the Normal element). This hypothesis also was not supported.

The F-ratio for Oddity and Normal elements in photographs showed the Normality elements were similarly perceived--that is, there was no significant difference in the mean interests.

When Normality elements were combined with those of Testimonial Quality, Oddity was preferred when combined with Routine Identification, but no Oddity was preferred when combined with Hedonistic Empathy. No

differential interest was observed in the means of Oddity and Normal when combined with Compassionate Empathy.

Hypothesis No. 3

This hypothesis stated the mean interest of either the Hedonistic or Compassionate Empathy elements would be greater than mean interest for photos with Routine Identification. This hypothesis was not supported.

Results showed students preferred photos with Hedonistic Empathy significantly more than photos with Compassionate Empathy. Although there was a tendency to rank pictures with Hedonistic Empathy higher than those with Routine Identification, this difference was not significant. Mean interest in photos with Routine Identification was in fact greater than mean interest in photos with Compassionate Empathy, but not beyond chance expectations.

Hypothesis No. 4

This hypothesis stated the mean interest in photos with Oddity would be greater than that in photos containing Known Principal(s), Hedonistic Empathy, or Compassionate Empathy. This was not supported.

The order of preference was: Hedonistic Empathy, 6.56; Known Principal(s), 6.18; Oddity, 6.06; Normal, 5.95; Routine Identification, 5.90; Unknown Principal(s), 5.82; and Compassionate Empathy, 5.56.

Hypothesis No. 5

This hypothesis stated mean interest of the photo elements would

not differ significantly between male and female respondents. This final hypothesis was supported.

The obtained F-ratios for the interaction of Gender by the three content dimensions were all insignificant. Male and female mean interests of the photo elements did not differ significantly. There was a tendency for females to rank photos containing Compassionate Empathy higher than males, and for males to rank pictures containing Routine Identification higher than females, but these differences in mean interest could be chance fluctuations. The only observable differences in ranking of pictures, but not tested in this study, were on certain individual pictures.

Conclusions

This study sought to develop and test a model which would accomplish two important goals. First, the author sought to study the "underlying values" which affect reader picture interest. Second, it was hoped the study would supply research information to editors which would improve their predictions of reader preferences, assuming that an interesting photo might lead to presenting a more positive image for a college or university.

As noted earlier, photographs are an important part of the communication process. In the past few years, editors increasingly have devoted more editorial space to photographs, making photos more than just window dressing to break type. They enable editors to transmit a lot of information with drama and impact.

Therefore, there is an increased need for information on how best to use pictures in publications. The MacLean and Kao study (1973)

illustrated the value of research to editors. Their study provided increasingly more detailed information to editors to help predict reader reactions. They found the level of information "had significantly different effects on the accuracy of editors' predictions." (p. 134) The greatest increase was noted when editors were provided with reader Q-sorts. Q-methodology, developed by Stephenson (1953), is oriented to test an individual's ideas, notions, beliefs, attitudes, opinions, and other aspects of self-identity.

This study delved beneath the surface aspects of picture interest--aspects such as subject matter, size, shape, color, technical excellence, and concentricity--to search for the elusive underlying values which might be more helpful in editorial prediction. Three dimensions were tested for usefulness in predicting interest. These dimensions were:

1. Prominence, with two levels: Known Principal(s) and Unknown Principal(s)

2. Normality, with two levels: Oddity and Normal

3. Testimonial Quality, with three levels: Hedonistic Empathy, Compassionate Empathy, and Routine Identification.

The author also tested for value differences among males and females. The respondents were high school seniors from Stillwater and Perkins, Oklahoma.

In general, these seniors were hedonistic in their picture preferences. They showed a marked preference for pictures containing Hedonistic Empathy, while rejecting pictures containing Compassionate Empathy. There was a tendency to reject as "boring" certain photographs containing Routine Identification--especially if the Routine

Identification element was combined with Unknown Principal(s) and no Oddity. This group of pictures received the lowest mean interest.

Interest in pictures containing Known Principal(s) and Oddity depended upon which element of Testimonial Quality the picture contained. Students preferred pictures with Known Principal(s) if the photo also contained the pain, suffering, or sadness of Compassionate Empathy, or the "boredom" of Routine Identification. If the picture was of an Hedonistic Empathy nature, students lost interest in Known Principal(s), and preferred Unknown Principal(s).

Likewise, if the photo contained Routine Identification, the readers preferred pictures with Oddity. Conversely, if the picture was of an Hedonistic nature, the readers preferred no Oddity.

The only hypothesis supported in this study was the one which stated there would be no differences in interest shown by males and females. This hypothesis was based on the thought that if the three content dimensions truly tested the underlying values of picture interest, then males and females might infer connotative meaning from a consistent or standard stock of signs. This hypothesis of a consistent stock of signs was supported in research by Fosdick and Tannenbaum (1964, pp. 175-182). Therefore, this author hypothesized that interest values would be taken from such connotative meaning, and should not differ between males and females if the two did indeed draw meaning from a similar stock of symbolism.

Although there were no general differences determined in the interactions of the independent variables as tested by analysis of variance, there were some observations made by this author which did indicate <u>possible</u> differences between male and female picture interests.

There was considerable difference on the appeal of picture No. 70 containing Unknown Principal(s), Normal, Hedonistic Empathy, and picture No. 20, containing Unknown Principal(s), Oddity, Hedonistic Empathy (see Appendix B). Both pictures were of attractive females in swimsuits. Both photographs were ranked highly by most males, with exceptions, and lowly ranked by females, with exceptions. Picture No. 70 received a mean interest score of 9.6 by the male respondents, but only 4.9 by females.

This might indicate the need for a fourth element of Testimonial Quality--perhaps, defined by aspects of vicarious sex. This might allow the researcher to determine differences in picture interest if there was a balance of pictures of females in swimsuits and males in swimsuits.

It could be that, although males and females might show preference for pictures of the opposite sex, there might be similarity of male and female interest in the vicarious sex element.

Through research conducted for this thesis, this author has attempted to add another piece to the puzzle of predicting reader response. Q-methodology can be an important and useful tool by providing helpful references to the editor in a systematic way. This is done by presenting a set of pictures in the rank order an individual or group of readers sorted them. The editor could review the Q-arrays and look at the kinds of pictures that group of readers values and rejects highly (MacLean and Kao, p. 135). This would increase the editor's knowledge for predicting larger audiences of similar individuals.

Recommendations

Chapter I revealed the problem of efficacy of editorial material in prospective student publications. Some basic questions were identified.

In light of the findings of this study, recommendations can be made to address some of these questions.

1. What types of photographs will cause potential students to read a maximum number of pages, assuming an interesting photograph might lead to reading the accompanying text? One recommendation drawn from this study would be to give the readers pictures which are hedonistic. That is, the readers indicated an interest in pleasure--people having a good time, success, beauty, friendship, and being winners.

2. What order of preference will they place on the content types? We already have noted respondents preferred Hedonistic Empathy. They were least interested in photographs with Compassionate Empathy. Preference of Known Principal(s) and Oddity depended on other elements in the photo. The editor probably could increase interest in a photograph with Routine Identification if Known Principal(s) or Oddity was included. If the photo contains Compassionate Empathy, the findings indicated the interest would be higher if the picture also contained Known Principal(s).

If the photo contains Hedonistic Empathy, editors should select photos which contain only that element. The interest in this case seems to be higher if Hedonistic Empathy and no Known Principal(s) or Oddity is present.

3. Are there some types of photos published in the guide for new students that are wasted space? The students indicated they would reject pictures containing sadness, pain or suffering. Another type picture which seems to waste space are those with Routine Identification, but no Oddity or Known Principals. Many classroom photos, people sitting at a computer console, and dorm-room pictures often are considered boring.

4. Should usage of some photos be increased? It would seem that photos containing vicarious pleasure and the strongly picturesque should replace those of the type the reader would reject.

Many editors may object to this statement because it indicates they should give readers what they want rather than what they need to know. However, it should be the goal of any editor to capture the interest of the reader. Otherwise, the reader may not read the piece and the editor's job of communicating with the reader is not accomplished. The solution should be to make "information" pictures more interesting by including fun, success, or some aspect of Hedonistic Empathy in the scene. This admittedly will require more forethought and creativity on the part of both the editor and the photographer, but the reward should be a more attractive and well-read publication.

Other Areas of Research

Based upon the findings of this study, and upon the post study reflections of the author, certain other areas might lend further insight into the underlying nature of picture interest:

1. The author feels a study using attention scores to test the pictorial content dimensions would be effective to determine the communicative value of published photographs.

2. The author recommends a study adding a fourth element--vicarious sex--to test differences between male and female picture interests.

3. A study is recommended using extensive demographic information combined with factor analysis to determine "types" of readers who might differ in their interest in pictures.

4. A frequency analysis of pictures published in prospective

student publications to determine which type content the editors prefer to use in their publications.

5. A study might be useful breaking the Testimonial Quality dimension into smaller elements, such as pleasure, picturesque, vicarious sex, and others to gain fuller insight into a "common or standard stock of signs" which readers or editors use to imply connotative meaning.

6. A gatekeeper study of the selection process would be useful to study how pictures flow through the "gate" of institutional publications.

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APPENDIXES

APPENDIX A

INSTRUCTIONS TO THE JUDGES

Instructions to Judges

1. In the near future, the researcher will attempt to measure the picture interests of a group of high school seniors by asking them to rank-order a set of 48 photographs, each containing a specific combination of three content dimensions. A discussion of the methodology and design of the study, as well as the definitions of the dimensions--Prominence, Normality, and Testimonial Quality--is contained in the rough draft of Chapter III you have been given. I need your help in choosing the best photographs to fit each of the 12 combinations of content elements.

2. You have been given 12 packets of photographs, each labeled with the particular set of content element combinations which the pictures are thought to contain. Essentially you will be choosing the best four pictures which best represent that set or combination of content elements. Note, this does not necessarily mean you will choose the best four pictures, but only the four pictures which <u>are strongest in containing the content elements of that set.</u>

3. Pick up the first packet of pictures and remove the pink cards and the pictures. Take the pink identification cards and spread them out in front of you, left to right, with No. 1 on the left.

4. Pick up the set of pictures and choose the picture which most strongly represents the identified combination of content elements, and place it on the pink card labeled No. 1. Then choose the picture which is second strongest in that combination, placing it on card No. 2. Continue until all pictures have been used up, with all pictures on pink cards.

5. When you have finished ranking (sorting) all pictures for that set, pick up the pink cards with their respective pictures on top of them from left to right in the following order: Pick up picture No. 1 with the pink identification card and place it on picture No. 2. Then pick up pictures Nos. 1 and 2 with their pink cards and place them on top of picture No. 3, and so on. Place the pictures back in the envelope from which they originally were taken, in the order in which you choose them, that is, with picture No. 1 on top.

6. Perform the same ranking with all 12 sets of pictures. Please handle the photos and cards with care, so that they may be reused.

7. When you have completed with all 12 sets of pictures, please return to the researcher. Thank you.

APPENDIX B

Q-SORT INSTRUCTIONS

Instructions for Sorting Photographs

1. This study is an attempt to measure your picture interests, as reader, by how you rank order a set of photographs.

2. Please imagine that you are reading an ideal prospective student magazine which has been sent to you from the college or university of your choice. This magazine gives you information about the college or university, and how to apply for enrollment, and where to request futther information. The deck of photographs are those which might possibly featured in this ideal prospective guide for new students magazine. On the basis of your interest in these pictures, rank the pictures in the order of their interest to you, from those with very high interest to those with very little interest.

3. Lay aside the blue identification cards for a moment. Take the remaining white cards which have the photographs on them, and look at each picture carefully.

4. After you have finished looking at every picture, place it in one of the three piles, according to how well you like the picture. In the left-hand pile you create, place all pictures that you like very much. In the right hand pile, place all pictures in which you have the least interest. Put all pictures left over in the middle pile.

Most Inter-est	Photos Left Over	Least Inter-est

5. Now take the group of blue identification cards. Spread this deck of cards in front of you, left to right, No. 11 to No. 1, as follows:

#11	#10	#9	#8	#7	#6	#5	#4	#3	#2	#1
2 Pix	3 Pix	4 Pix	5 Pix	6 Pix	8 Pix	6 Pix	5 Pix	4 Pix	3 Pix	2 Pix
Very HIGH Int-er-est										Very LOW Int-er-est

6. Pick up the left-hand pile that you previously sorted. From these pictures (pix), chose 2 that you like the bestand place them on

top of Card No. 11 marked Very High Interest. From the remaining pictures you have in your hand, take 3 pictures in which you have very high interest and place them on top of Card No. 10. Go on down the line until you run out of pictures that you have from the left-hand pile. (At any time, you may change your mind on the placement of pictures, if you wish.)

7. Now, pick up the right-hand deck of pictures that you originally sorted. From these pictures, choose 2 you like the least and place them on top of Card No. 1 marked Very Low Interest. From the pictures you have left in your hand, choose 3 pictures you like the least and place them on top of Card No. 2. Work on up the line until you have run out of pictures that were in the right-hand pile.

8. Now pick up the middle pile of pictures. Begin sorting them at the point where you previously ran out of stories when you were moving from left to right from Card No. 11.

For example, let's say that on the first pile you ran out of pictures when you got to Card No. 8. In fact, let's say you ended up with only 3 pictures to lay on Card No. 8, even though it calls for 5 pictures. So, from the middle pile you now have in your hands, choose the 2 pictures you like the best and add them to the 3 already on Card No. 8. Then go to Card No. 7, which calls for 6 pictures that you like the best from the ones you have left. Continue down the line until you run out of pictures.

9. When all the pictures are sorted and the correct number is on each blue identification card in your order of preference, pick up the piles from left to right in the following order: Pick up Pile No. 11, including the blue identification card on the bottom. Place Pile No. 11 on top of Pile No. 10. Then pick up pile Nos. 11 and 10 combined and place them on top of Pile No. 9. Continue down the line until you have all pictures in one pile.

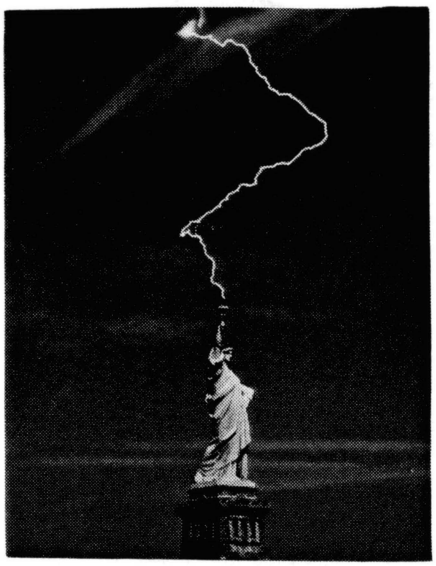
10, Now in this pile, the top 2 pictures are the ones you like the very best and the 2 pictures on the bottom are those you like the very least. Please write a note on the back of each of these 4 pictures, the reasons for selecting these pictures as your best and least liked pictures.

After writing your comments, place the pictures in their proper place in order, put the rubber band around the complete pile and that is it.

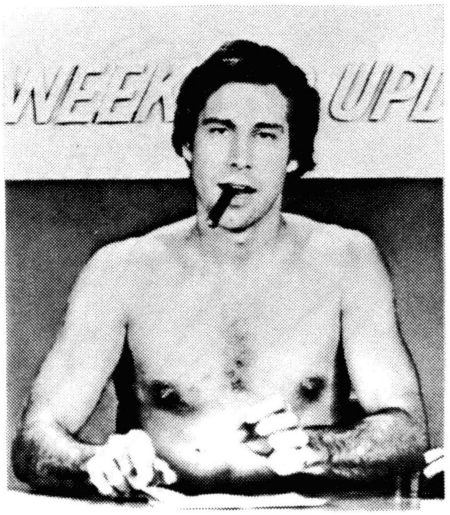
APPENDIX C

THE FORTY-EIGHT PHOTOGRAPHS CONTAINING COMBINATIONS OF THE ELEMENTS OF TESTIMONIAL QUALITY, PROMINENCE, AND NORMALITY

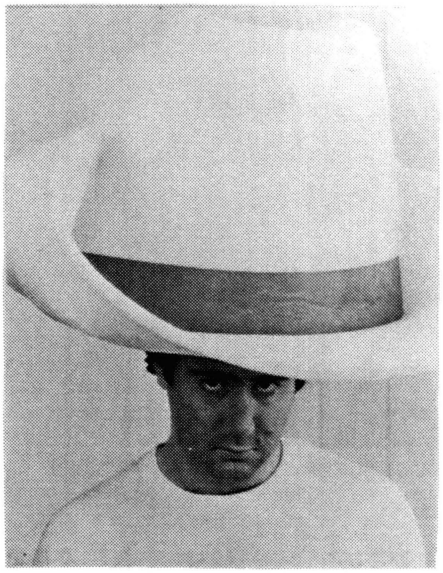
Known Principals, Oddity,
Routine Identification



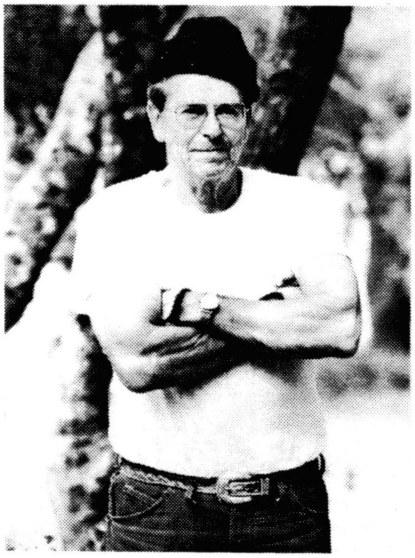
Picture No. 87, The
Statue of Liberty



Picture No. 84,
Chevy Chase

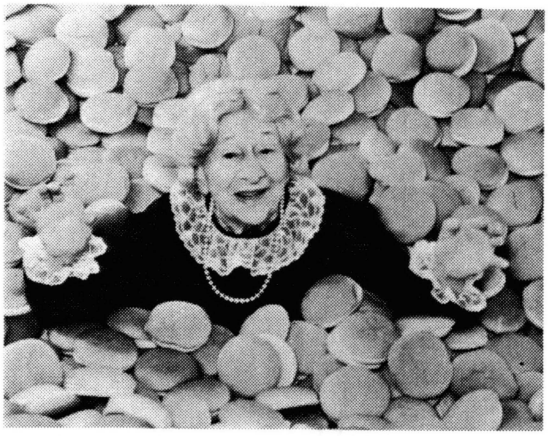


Picture No. 85,
Andy Kaufman



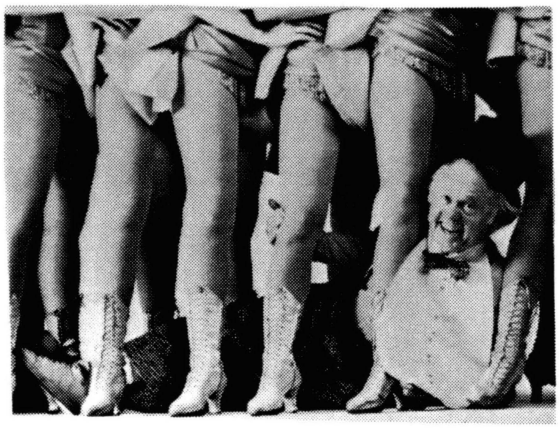
Picture No. 86,
Ronald Reagan

Known Principals, Oddity,
Hedonistic Empathy

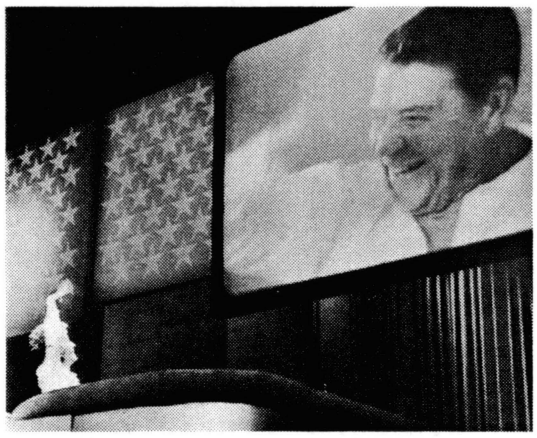


Picture No. 4, Clara Peller
"Where's the beef?" lady

Picture No. 6



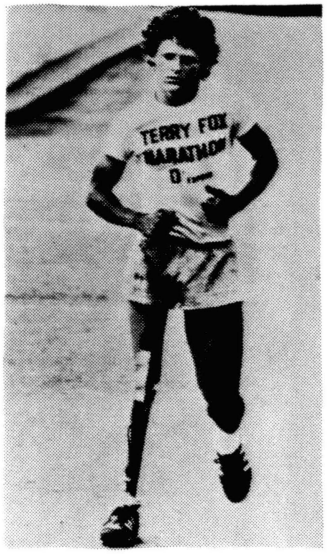
Picture No. 7,
Mickey Rooney



Picture No. 8, President
Ronald Reagan and Nancy
Reagan

Known Principals, Oddity,
Compassionate Empathy

Picture No. 72,
Baby Fae

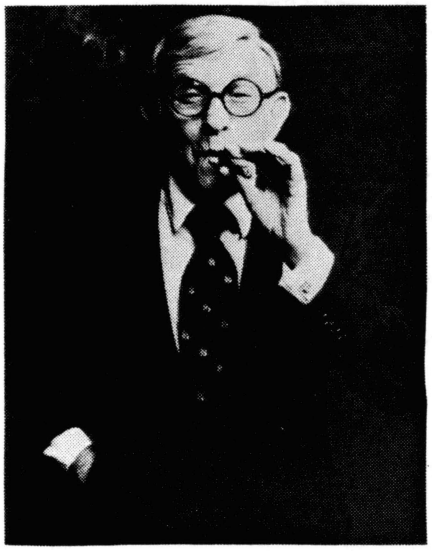


Picture No. 73,
Terry Fox

Picture No. 71,
The Bubble Boy, David

Picture No. 74, The
Statue of Liberty

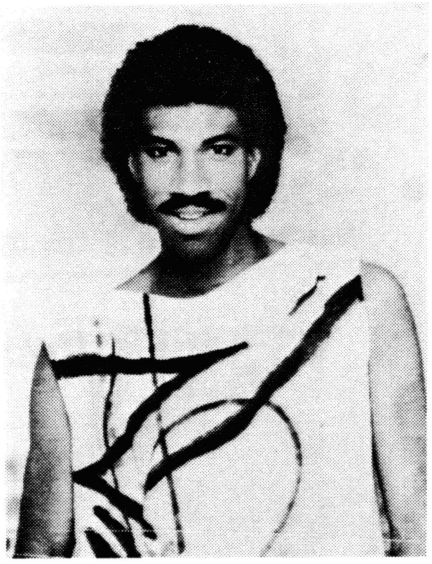
Known Principals, Normal,
Routine Identification



Picture No. 49,
George Burns

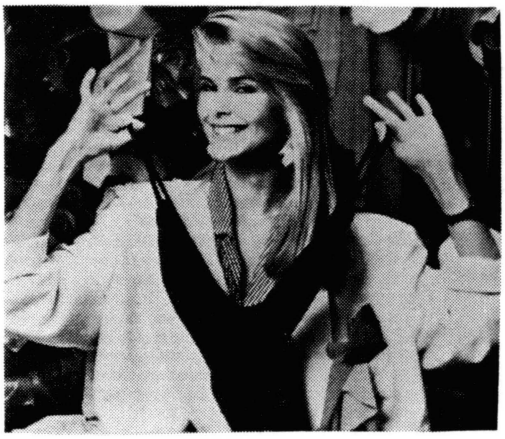
Picture No. 53, Vice-President
George Bush

Picture No. 52,
President Ronald Reagan



Picture No. 52,
Lionel Richie

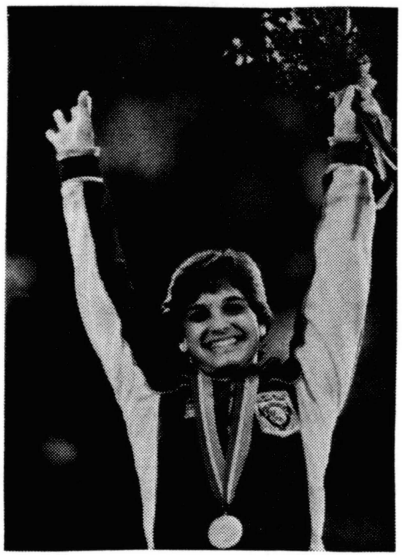
Known Principals, Normal,
Hedonistic Empathy



Picture No. 56,
Model Christie Brinkley

Picture No. 55, Cher

Picture No. 60,
President Ronald Reagan

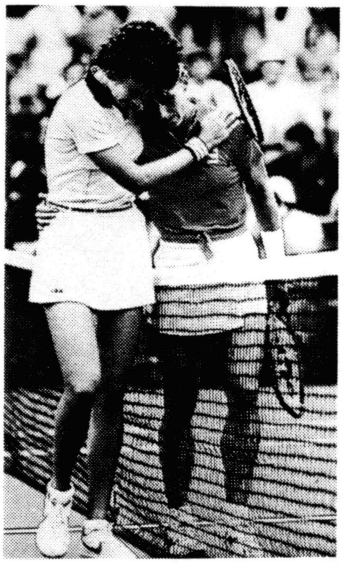


Picture No. 58, Olympic
Gymnast, Mary Lou
Retton

Known Principals, Normal,
Compassionate Empathy

Picture No. 42, Olympic runner, Mary Decker

Picture No. 46, President Ronald Reagan and Nancy Reagan

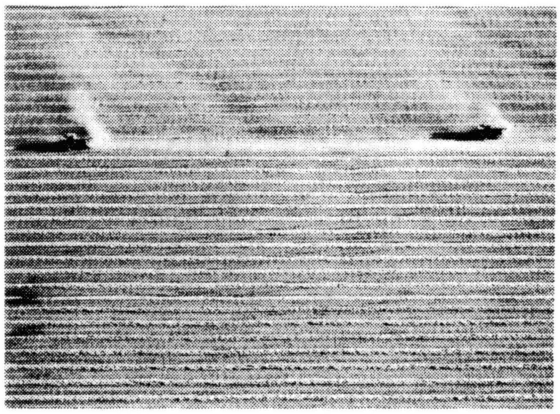


Picture No. 43, Tennis players Pam Shriver and Martina Navratilova

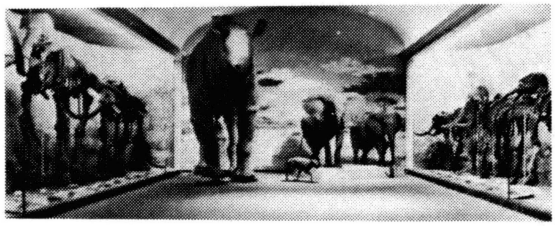
Picture No. 45, England's Lady Diana

Unknown Principals, Oddity,
Routine Identification

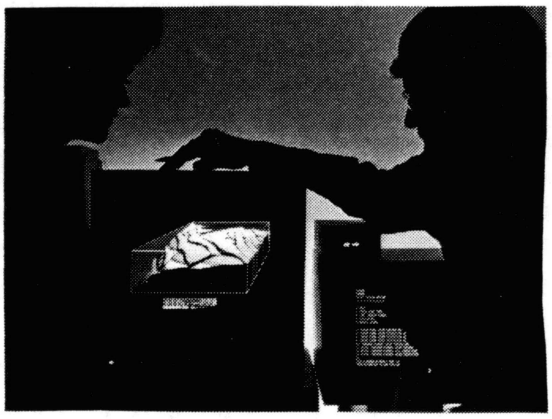
Picture No. 36



Picture No. 37



Picture No. 35

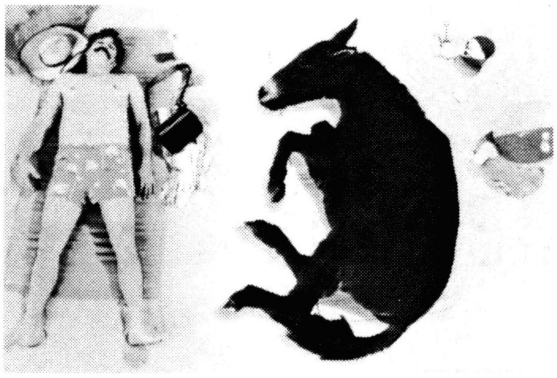


Picture No. 39

Unknown Principals, Oddity,
Hedonistic Empathy

Picture No. 18

Picture No. 23

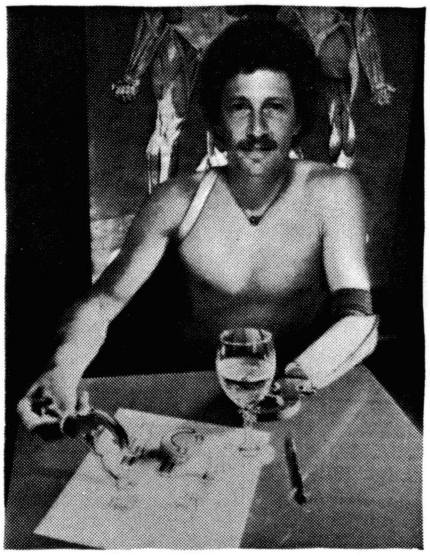


Picture No. 22

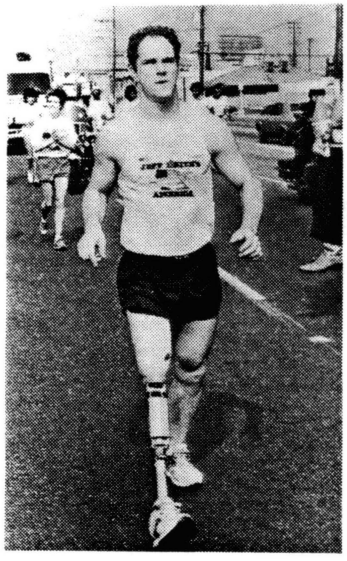
Picture No. 20

Unknown Principals, Oddity,
Compassionate Empathy

Picture No. 32



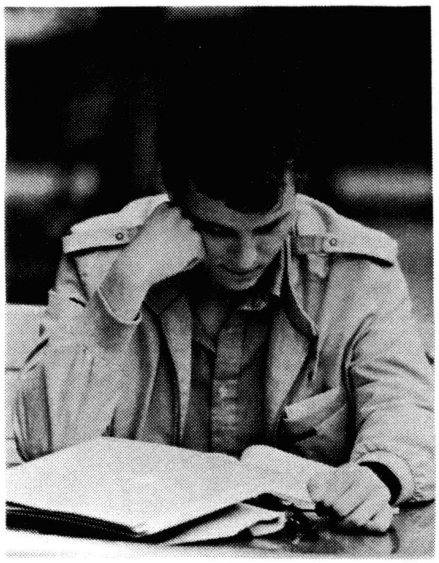
Picture No. 31



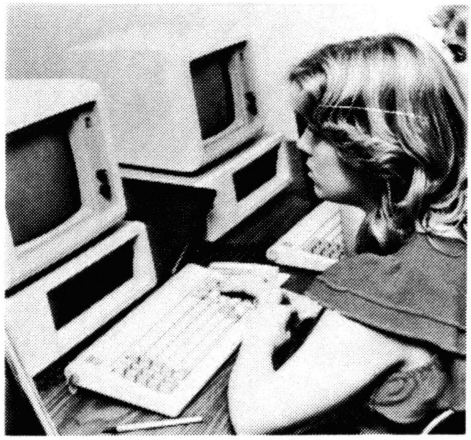
Picture No. 27

Picture No. 28

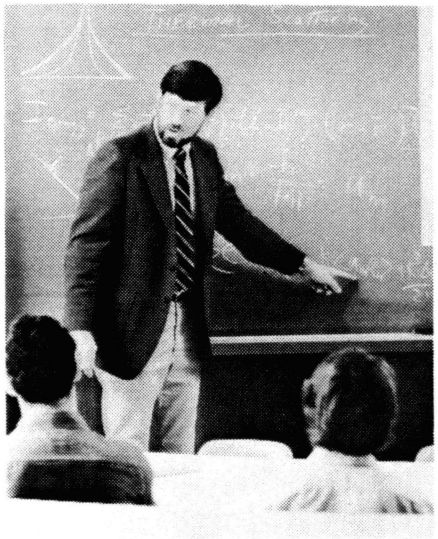
Unknown Principals, Normal,
Routine Identification



Picture No. 82



Picture No. 79



Picture No. 77

Picture No. 80

Unknown Principals, Normal,
Hedonistic Empathy

Picture No. 68

Picture No. 70

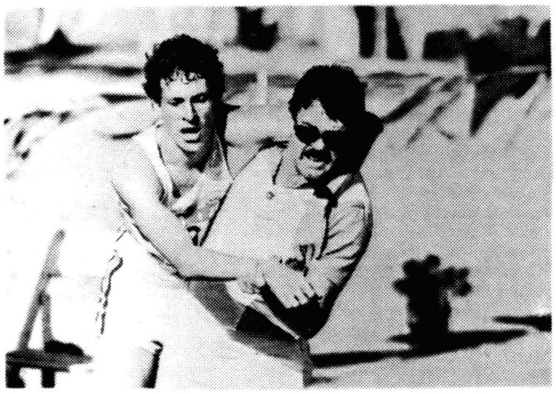
Picture No. 64

Picture No. 65

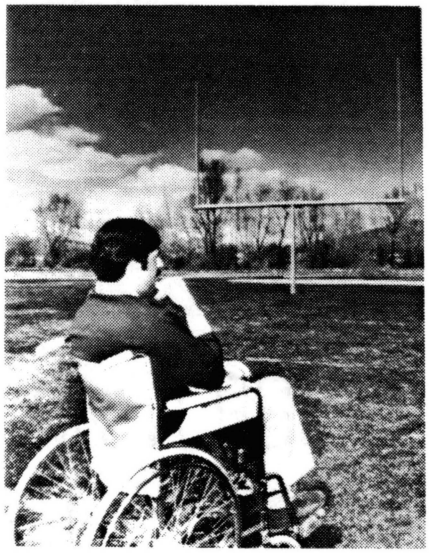
Unknown Principals, Normal,
Compassionate Empathy

Picture No. 16

Picture No. 15



Picture No. 9



Picture No. 11

APPENDIX D

THE STUDENTS Q-SORT SCORES

STUDENTS' Q-SORT SCORES

Respondent	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	Mean
Picture NO.	Known Principals, Oddity, Compassionate Empathy																				
71	6	5	1	6	7	5	5	3	1	2	2	9	8	3	9	3	4	5	10	8	5.10
72	6	3	3	5	5	9	2	1	6	3	1	11	8	2	9	7	4	3	10	8	5.30
73	8	6	4	11	9	7	5	9	7	2	6	6	9	1	8	7	8	9	9	5	6.80
74	9	7	6	5	4	7	6	9	8	5	7	6	7	6	7	6	9	10	7	5	6.80
	Known Principals, Oddity, Hedonistic Empathy																				
4	2	1	5	7	4	2	9	7	9	7	3	3	5	7	6	10	8	6	6	10	5.85
6	4	4	7	8	3	3	6	6	8	8	9	7	9	6	4	8	8	9	7	9	6.65
7	9	7	8	4	8	2	3	8	7	8	6	2	2	9	5	7	2	6	6	8	5.85
8	8	9	7	4	7	6	5	3	3	10	5	5	6	6	6	2	2	3	7	7	5.55
	Known Principals, Oddity, Routine Identification																				
84	7	8	10	9	8	7	10	7	7	9	10	9	5	5	8	6	5	3	8	9	7.50
85	7	7	9	8	3	1	4	6	2	9	4	3	3	4	3	4	5	2	3	8	4.75
86	10	11	7	8	5	4	3	5	7	7	5	3	5	6	2	3	3	1	5	4	5.20
87	11	11	11	11	11	9	9	11	11	11	8	6	10	10	6	8	9	8	7	11	9.45

Respondent	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	Mean
Picture No.	Known Principals, Normal, Hedonistic Empathy																				
55	1	6	4	5	5	5	9	6	3	6	2	1	3	4	1	5	2	6	8	7	4.45
56	8	8	8	10	7	10	10	9	6	9	6	4	6	8	6	10	3	7	8	6	7.45
58	7	1	1	10	7	10	10	6	10	11	8	9	8	8	10	8	6	10	11	6	7.85
60	7	9	5	5	5	5	5	5	6	7	5	7	9	6	7	8	4	7	6	6	6.20
	Known Principals, Normal, Routine Identification																				
49	10	8	9	4	6	6	7	8	7	10	10	9	4	7	5	6	5	6	8	7	7.10
52	9	5	4	6	5	1	8	9	5	8	10	10	11	9	8	5	4	4	8	6	6.75
53	8	7	6	3	4	9	6	4	6	6	4	5	4	5	3	5	4	6	3	4	5.10
54	6	10	7	4	2	3	6	3	6	5	7	6	4	7	4	6	3	2	7	5	5.15
	Known Principals, Normal, Compassionate Empathy																				
42	2	5	2	8	10	10	5	11	5	5	3	8	8	4	11	7	7	8	9	6	6.70
43	7	4	2	3	7	8	6	7	3	6	5	6	6	5	5	9	8	7	4	3	5.55
45	4	5	6	8	10	4	7	2	5	5	4	4	5	7	8	6	5	6	5	8	5.70
46	6	10	5	3	6	4	4	7	4	7	3	4	7	4	7	6	3	7	7	4	5.40

Respondent	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	Mean
Picture No.	Unknown Principals, Oddity, Compassionate Empathy																				
27	8	6	4	9	8	6	4	2	7	3	5	6	9	1	7	2	7	6	9	4	5.65
28	3	7	10	2	3	8	4	6	6	6	1	8	6	3	2	1	6	5	3	2	4.60
31	5	6	3	7	5	6	2	1	4	3	5	6	6	4	5	1	6	4	4	3	4.30
32	4	5	3	6	6	8	1	5	4	1	2	6	6	3	9	2	6	4	10	6	4.85
	Unknown Principals, Normal, Compassionate Empathy																				
9	5	4	5	9	8	6	6	5	4	6	4	5	7	2	9	9	7	8	9	4	6.10
11	3	6	8	7	6	5	6	4	4	1	6	5	7	3	10	3	6	5	5	7	5.35
15	5	2	3	4	6	3	8	10	5	3	7	7	4	7	10	6	7	9	6	6	5.90
16	3	2	2	6	6	6	3	8	2	2	3	5	10	2	7	7	6	5	5	5	4.75
	Unknown Principals, Oddity, Routine Identification																				
35	6	6	6	1	3	7	2	6	8	4	9	5	6	5	2	5	11	5	4	5	5.30
36	11	9	11	7	8	6	6	8	3	6	9	8	7	11	6	9	10	11	4	11	8.05
37	6	6	7	6	7	4	4	6	5	7	4	10	1	10	4	9	9	7	2	7	6.05
39	6	6	7	2	1	7	8	7	10	4	6	4	8	6	4	5	7	8	1	1	5.40

Respondent	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	F1	F2	F3	F4	F5	F6	F7	F8	F9	10	Mean
Picture No.	Unknown Principals, Oddity, Hedonistic Empathy																				
18	1	4	8	5	6	8	8	5	2	5	8	8	6	9	6	4	8	8	3	7	5.95
20	10	9	8	10	9	9	11	6	8	8	6	2	5	10	5	10	1	5	6	5	7.15
22	4	8	9	5	9	2	1	5	5	9	8	8	11	8	8	5	10	2	5	10	6.60
23	2	7	5	7	9	5	3	8	6	4	9	10	7	9	6	3	9	9	5	10	6.65
	Unknown Principals, Normal, Hedonistic Empathy																				
64	5	2	6	6	4	3	7	3	1	6	6	7	2	6	5	8	10	3	11	2	5.15
65	6	3	6	6	6	11	7	7	11	5	11	11	5	8	11	11	6	10	6	9	7.80
68	4	8	10	7	10	6	9	10	10	7	8	7	10	8	7	11	11	11	6	9	8.45
70	9	10	9	9	11	11	11	10	8	8	6	1	2	11	3	6	1	7	6	6	7.25
	Unknown Principals, Normal, Routine Identification																				
77	7	3	6	6	4	7	7	4	9	6	7	2	3	6	3	4	7	4	2	1	4.90
79	5	5	6	1	2	5	8	4	9	4	7	7	3	5	4	4	5	4	1	3	4.60
80	3	3	4	2	1	4	5	2	6	4	7	4	1	5	1	4	5	1	2	3	3.35
82	5	4	5	3	2	8	7	4	9	10	11	3	4	7	6	7	6	6	4	2	5.65

APPENDIX E

RESPONDENT DEMOGRAPHIC QUESTIONAIRE

General Information

I am conducting research in conjunction with the Mass Communication Department of Oklahoma State University and you have been selected to participate in this project.

I am interested in finding out as much as possible about people's picture preferences. In order to analyze the data I have collected effectively, I need you to answer the following demographic questions.

Your responses will remain confidential and you will not be identified by name at any time during the study or during the tabulation of results and their analysis.

Thank you for your time and consideration.

1. Sex: male____ female____

2. Age: 16__ 17__ 18__ 19__

3. Do you plan to attend a college or university after graduation from high school? Yes___ No___ Not sure___

4. Single___ Married___

5. Do you work? Part time___ Full time___ No___

6. Do you subscribe to any newspapers or magazines? Yes___ No___
   How many?___
   What are they?

7. What kind of sports do you like?_____

8. What are your hobbies?_____

9. How many art courses have you taken in high school? ____

10. How many photography courses have you taken? ____

11. Do you own a camera of any type? Yes___ No___ What type?

VITA

James A. Thomas

Candidate for the Degree of

Master of Science

Thesis: A THREE DIMENSIONAL CONTENT MODEL FOR MEASURING INTEREST IN PHOTOGRAPHS

Major Field: Mass Communications

Biographical:

Personal Data: Born in Phoenix, Arizona, June 14, 1951, the son of Mr. William Thomas and Mrs. Maxine Thomas.

Education: Graduated from Fayetteville High School, Fayetteville, Arkansas, 1969; received the Bachelor of Science degree from the University of Arkansas at Fayetteville in 1974; completed the requirements for the Master of Science degree at Oklahoma State University in December, 1985.

Professional Experience: Freelance photojournalist, photographer and reporter, Interstate News, Siloam Springs, Arkansas, 1975-1978; news editor, Southside Times, Tulsa, Oklahoma, 1978; photographer, Oklahoma State University, 1978-1985. President, North Central Oklahoma Professional Chapter, The Society of Professional Journalists, Sigma Delta Chi, 1981.